



NASA Grant and Cooperative Agreement Manual (GCAM)

In Accordance with 2 CFR Part 200

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1.0 Purpose

The National Aeronautics and Space Administration (NASA) Grant and Cooperative Agreement Manual (GCAM) provides policy guidance to NASA Program Managers, Technical Officers and Grant Officers to implement government-wide and NASA-specific regulations for awarding and administering grants and cooperative agreements with educational and non-profit organizations; State, local, and Indian tribal governments; and for-profit entities when no cost-sharing is required. The government-wide regulations are set forth in the Code of Federal Regulations (CFR) 2 CFR 200 and are supplemented by NASA regulations provided in 2 CFR Part 1800. The Federal Acquisition Regulation (FAR) does not apply to grants and cooperative agreements except when a grant/cooperative agreement is made with a commercial firm. In that case, the FAR cost principles apply as stated under 14 CFR 1274. Throughout this manual, the term “grant” includes “cooperative agreement” unless otherwise indicated

2.0 General

2.1 Relationship between the GCAM and the Federal Acquisition Regulation

The Federal Acquisition Regulation (FAR) and Federal procurement statutes do not apply to grants or cooperative agreements. Broad Agency Announcements (BAAs) are a type of solicitation that may result in the award of either a grant/cooperative agreement or a contract. Any solicitation that may result in a contract award is subject to the FAR. Solicitations that cannot result in the award of a contract are subject to the GCAM.

The NASA FAR Supplement (NFS) describes two types of BAAs: Announcements of Opportunity (AOs) and NASA Research Announcements (NRAs). AOs and NRAs may result in the award of contracts, cooperative agreements, and/or grants. In addition to Part 35 of the FAR, AOs are subject to NFS Part 1872, and NRAs are subject to NFS 1835.016-17.

Even if a BAA is subject to the FAR during the solicitation process, the GCAM applies when it is determined, after the receipt of proposals, that the resulting award will be a grant or cooperative agreement. If a BAA results in the award of a grant or cooperative agreement, then the Grant Officer must include the terms and conditions required by this Manual in the resulting award document, rather than the terms and conditions of the FAR and NFS.

Funding through a Cooperative Agreement Notice (CAN) is always done through a cooperative agreement. A CAN is used to solicit unique research programs and/or related activities that involve a relatively high degree of interaction and cooperation between NASA and the selected recipient(s) to achieve NASA’s desired objectives (for example, to develop and operate a research institute, carry out an extensive educational/public outreach activity, or acquire a specified technology capability).

2.2 Acronyms

AO	Announcement of Opportunity
AOR	Authorized Organization Representative
BAA	Broad Agency Announcement
CAN	Cooperative Agreement Notice
CFDA	Catalog of Federal Domestic Assistance
CFO	Chief Financial Officer
CFR	Code of Federal Regulations

CMM	Contract Management Module
DAA	Document Availability Authorization
DCMA	Defense Contract Management Agency
DoD	Department of Defense
DUNS	Data Universal Numbering System
FAPIIS	Federal Awardee Performance and Integrity Information System
FGCAA	Federal Grants and Cooperative Agreements Act
FIPS PUB	Federal Information Processing Standards Publication
FPDS-NG	Federal Procurement Data System-Next Generation
FFATA	Federal Funding Accounting and Transparency Act
FFR	Federal Financial Report
FSRS	Federal Subaward Reporting System
GCAM	Grant and Cooperative Agreement Manual
GIC	Grant Information Circular
GPC	Grants Policy and Compliance
ICPMO	Internal Central Printing Management Officer
ISS	International Space Station
ITAR	International Traffic in Arms Regulations
JAUP	Justification for Acceptance of Unsolicited Proposal
JPL	Jet Propulsion Laboratory
JUNG	Justification for Non-competitive Grants
MOA	Memorandum of Agreement
NASA	National Aeronautics and Space Administration
NAIS	NASA Acquisition Internet Service
NEPA	National Environmental Policy Act
NFS	NASA FAR Supplement
NPR	NASA Procedural Requirements
NSPIRES	NASA Solicitation and Proposal Integrated Review and Evaluation System
NRA	NASA Research Announcement
NSSC	NASA Shared Services Center
OCFO	Office of the Chief Financial Officer
OCI	Organizational Conflict of Interest
OMB	Office of Management and Budget
ONR	Office of Naval Research
PMR	Procurement Management Review
PCSA	Property Control System Analyses
PCSR	Plant Clearance System Reviews
PPS	Procurement for the Public Sector
RFP	Request for Proposal
RPPR	Research Performance Progress Report
SAM	System for Award Management
SPOC	Single Point of Contact
STI	Scientific and Technical Program Information
STIPO	Scientific and Technical Information Program Office
TAS	Treasury Account Symbol

3.0 Center Retention of Authority and Choice of Award Instrument

3.1 Center Retention of Authority

Agency policy requires that all grant and cooperative agreement actions be processed, awarded, managed, and administered by the NSSC, except for the following specific actions:

1. Cooperative agreement actions with commercial firms, subject to 14 CFR 1274, are waived from the NSSC's responsibility/accountability (Note: Only those cooperative agreement actions involving "mandatory" cost sharing are exempt; the NSSC is responsible and accountable for awarding and administering cooperative agreement actions with commercial firms when the cost sharing is "voluntarily" offered).
2. For all other than grants and cooperative agreements outside of commercial cooperative agreements with mandatory cost sharing, Center requests may be submitted only for individual solicitations (e.g., Announcements of Opportunity, NASA Research Announcements, and Cooperative Agreement Notices) and shall be applicable to all cooperative agreements resulting from the particular solicitation. A separate NASA HQ, OCFO Policy Division approval, signed by the Director of Policy must exist for each solicitation. NASA HQ, OCFO Policy Division approvals shall only be effective for the specified period of performance of the individual cooperative agreement, plus any duly executed time extension. Follow-on actions, both competitive and non-competitive, beyond the original period of performance (excluding time extensions and authorized renewal/option periods) shall require the submission of a new request from the Center procurement office.
3. The NASA Centers shall maintain a centralized file of all NASA HQ approvals for audit and internal management control purposes, to include Procurement Management Reviews (PMRs), in addition to filing a copy of the approval in the official file.

3.1.1 Request for Waiver

To be formally waived from NSSC's responsibility/accountability by NASA Headquarters, OCFO Policy Division, follow the procedures and approvals below:

The NASA Center shall prepare and submit a request (i.e., memorandum format), addressed to the Grants Policy and Compliance (GP&C) Branch within the NASA HQ, OCFO Policy Division, and copy the HQ Funding Office(s). At a minimum, the NASA center request shall fully address or contain the following items:

1. Specific identification of the document as a "Request authority to award and administer a cooperative agreement at a NASA center vice NSSC"
2. Solicitation Number
3. A concise description of the proposed project
4. Total project budget or estimated cost to NASA
5. Period of Performance
6. Anticipated number of individual cooperative agreement awards
7. A statement as to whether this is a new project or a continuation of an existing project
8. A demonstration that the cooperative agreement action is not conducive to the NSSC's operating mode

9. A demonstration that the NASA center's procurement personnel possess the requisite training, experience, and qualifications to effectively award, manage, and administer cooperative agreements in accordance with Agency policy and regulation
10. CFDA number(s) funding this effort
11. Signature of the Center Procurement Officer or the Center Deputy Procurement Officer. An email endorsement of the Center request from either Center procurement official will suffice.

3.2 Type of Instruments

Determining choice of instrument is the first step needed to decide whether the GCAM applies. The Federal Grant and Cooperative Agreements Act of 1977 (FGCAA) was enacted to give agencies better understanding of the types of instruments executive agencies may award by characterizing the relationship between executive agencies and contractors, States, local governments, and other recipients in acquiring property and services and in providing U.S. Government assistance. The FGCAA characterizes instruments by defining the terms procurement contract, grant, and cooperative agreement.

The FGCAA defines a procurement contract as a legal instrument reflecting the relationship between the U.S. Government and a State, a local government, or other recipient when:

1. The principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. Government or
2. The agency decides in a specific instance that the use of a procurement contract is appropriate.

The FGCAA defines a grant as a legal instrument reflecting a relationship between the U.S. Government and a State or local government or other recipient when:

1. The principal purpose of the relationship is to transfer a thing of value to the State or local government or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U. S. Government; and
2. Substantial involvement is not expected between the executive agency and the State or local government or other recipient when carrying out the activity contemplated in the agreement.

The FGCAA defines a cooperative agreement as a legal instrument reflecting a relationship between the U.S. Government and a State or local government or other recipient when:

1. The principal purpose of the relationship is to transfer a thing of value to the State or local government or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. Government; and
2. Substantial involvement is expected between the executive agency and the State or local government or other recipient when carrying out the activity contemplated in the agreement.

Congress enacted the FGCAA because it was concerned about the perceived misuse of assistance agreements, specifically, using assistance agreements to circumvent competition and procurement rules. If the principal purpose of the funded activity is to provide something for the direct benefit or use of the Federal government, then a contract is the appropriate legal instrument to use. Grants and cooperative agreements, on the other hand, are considered a type of financial assistance because they

support or stimulate a public purpose.

3.3 Basic Considerations in Determining Award Instrument

The decision whether to use a contract, grant, or cooperative agreement as an award instrument must be based on the principal purpose of the relationship or arrangement. Normally this decision is made by the procurement official in consultation with the technical officer. The type of business entity or non-profit organization shall not be a primary factor in determining the award instrument.

Two essential questions should be asked in determining the appropriate funding instrument. The first question is: Will NASA be directly harmed in furthering a specific NASA mission or program requirement if the research or project is not accomplished? The answer to this question must be “No.”

The second question is: Is the work being performed by the recipient primarily for its own purposes, with NASA merely providing financial support or other assistance? The answer to this question must be “Yes.” If these two criteria are met in the manner specified, the research or project effort is generally not representative of a NASA requirement, and then the consideration is whether it supports or stimulates a public purpose.

3.3.1 Questions to Determine Principal Purpose

When NASA, within its authority, enters into a transaction in which the principal purpose is to accomplish a public purpose of support or stimulation authorized by Federal statute, a grant or a cooperative agreement is the appropriate instrument. Conversely, if the principal purpose of a transaction is to accomplish a NASA need, requirement, or service (in other words, to produce something for NASA use or to obtain a direct service for NASA use or benefit), a contract shall be used as the award instrument. The decision whether to use a contract, grant, or cooperative agreement as an award instrument must be based on the principal purpose of the relationship or arrangement. The type of business entity or non-profit organization shall not be a factor in determining the award instrument. Proposers may request with a grant or contract but NASA will determine the correct award instrument based on the above factors and NASA requirements. The grant officer has the final determination as to the appropriate award instrument.

The Principal Purpose usually can be determined through the Benefit or Use Test and the Support and Stimulation Test. The Benefit and Use Test assists in determining if NASA directly benefits from the research or project. A contract should be awarded when any of the answers to the following questions are “yes.”

The following are questions for the Benefit or Use Test:

- Is NASA the primary beneficiary or user of the activity?
- Is NASA providing the specifications for the project?
- Is NASA having the project completed based on its own identified needs?
- Does NASA require the delivery of tangible property at the completion of the activity?

The Support and Stimulation Test refers to the recipient of the grant or cooperative agreement. The recipient is doing the research or project for its own purposes and that NASA is merely providing the financial support or other assistance. The answers to the following question should be “yes.”

The following are questions for the Support or Stimulation. A grant or cooperative agreement should be awarded when any of the answers to the following questions are “yes.”

- Is the applicant performing the project for a public purpose?
- Is NASA merely supporting the project with financial or other assistance?
- Is the benefit to NASA incidental (in other words do funded activities complement NASA's mission)?

3.4 Determining Whether to Issue a Grant or Cooperative Agreement

The distinguishing factor between a grant and a cooperative agreement is the degree of Federal participation or involvement during the performance of the work activities. Substantial involvement pertains to programmatic involvement rather than administrative oversight. Examples of substantial NASA involvement and contribution could include or involve:

- NASA plays an active role in collaborative relations;
- Government personnel, property, facilities, equipment, or research capabilities are used or shared;
- The recipient works for a substantial amount of time at a NASA Center or NASA personnel works at the recipient's facility, provided the shared facility arrangements is at no cost to either party; or
- The collaboration serves to produce and/or enhance a jointly authored report or educational product.

3.5 Nature of Awards

Although NASA's authority is not limited to research grants, typically NASA awards grants to support research and research-related activities. Research-related activities may include education, travel, conferences, and training. Unless otherwise specified, performance will be assessed through the annual Research Performance Progress Report (RPPR).

3.6 Organizational Conflict of Interest Policy

Attending to the issues of conflict-of-interest, bias, and confidentiality is critical to ensuring the fairness and credibility of the proposal, evaluation, selection, award, and administration of Federal awards. Any actual or apparent conflicts of interest must be disclosed. Such a conflict would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of the parties, has a financial or other interest in a proposing organization. NASA has established policies and procedures to avoid, to the maximum extent practicable, conflicts of interests associated with Federal awards.

The recipient shall maintain written standards of conduct governing the performance of its employees engaged in the award and administration of contracts. The recipient may set standards for situations in which the financial interest is not substantial or the gift is an unsolicited item of nominal value. The standards of conduct shall provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the recipient.

4.0 Limitations

1. NASA does not award grants to provide monetary donations to individuals, groups or institutions regardless of the purpose(s).
2. NASA ability to award grants and cooperative agreements is limited by appropriations available to carry out authorized Agency programs. Advice of NASA legal counsel will be sought in unusual situations.
3. Excess Government research property may be donated to educational institutions and non-profit organizations pursuant to 15 U.S.C. 3710(I), and such donation is not considered a grant. See § 2 CFR 200.312(b).
4. Loans of other Government property not associated with a contract, grant, or cooperative agreement under 31 U.S.C. 6301 to 6308, and made under the Space Act of 1958, are accomplished through separate NASA loan agreements that are neither grants or cooperative agreements.
5. Neither grants nor cooperative agreements shall be used as legal instruments for consulting services to NASA.
6. Grants and cooperative agreements shall not be used as legal instruments for facility design or construction services to NASA.
7. NASA grants and cooperative agreements are typically not used to fund, in full or in part, real property or general remodeling, construction, or demolition of a new or existing non-NASA building or any other type of facility—including exterior spaces. This limitation does not prevent eligible recipients (such as research and/or education organizations, non-profit museums and/or planetariums, parks, etc.) from using funds from a NASA grant or cooperative agreement to acquire equipment production or to enhance, establish, and/or replace permanent NASA-related exhibits with total costs in excess of \$5,000. This limitation also does not prevent recipients from using funds from grants or cooperative agreements for the design, fabrication (commonly called construction), delivery, and/or installation of a NASA-related-permanent exhibit; for installation and/or operation of fixed or permanent planetarium equipment; for outdoor exhibits such as solar system walks or Mars Rover yards; or for the delivery, installation, operation, and/or maintenance of permanent, large research equipment.
8. Requesting an exception to facility, real estate, real property or construction limitations: it is unlikely that an award to create or enhance a facility or to purchase real estate or property will be approved unless specifically authorized by Congress. A review by Center legal counsel to assure legal sufficiency is required. When legal authority exists for a non-NASA entity to receive a grant or cooperative agreement for the design or construction of a NASA or non-NASA facility, the NASA Center must submit a request package to the OCFO Policy Division at Headquarters that at minimum includes:
 - a. Copy and full citation of the Congressional Authorization that names the recipient
 - b. Dollar value
 - c. Organization identifiers are required for all NASA awards, such as, but not limited to, name, address, and contact information of the recipient.

- d. The request package should state that a proposal has been received, accepted by the NASA Center as adequate for evaluation, evaluated, and determined suitable for funding.
- e. A proposal that is adequate for evaluation shall include, at a minimum, a reasonable description of the work to be performed and its technical objectives, a description of the resources needed, and an adequate justification of the proposed budget.
- f. The evaluation shall be conducted following the procedures in 2 CFR 200.204 and 205. The standards for determining that a proposal is suitable for funding are technical soundness and cost reasonableness and realism.
- g. The request package shall include a copy of the proposal and the technical and cost evaluations.
- h. In addition, the proposal should be reviewed by Center facilities National Environmental Policy Act (NEPA) Center representatives and historical preservation specialists to ensure compliance with the National Environmental Protection Act and the National Historic Preservation Act, and their findings should be included in the request package.

5.0 Pre-award

5.1 Competition

Consistent with the FGCAA, competition is not required, but encouraged in the award process for grants and cooperative agreements. Grants and cooperative agreements are classified in two major categories: discretionary and non-discretionary. Discretionary awards are those for which the Agency may issue a competitive solicitation to determine the recipient and the amount of the award. Generally, such awards are made using merit-based peer or scientific reviews following the procedures in 2 CFR 200 as supplemented by NASA at 2 CFR, subtitle B, Chapter XVIII. Non-discretionary awards typically are those actions that NASA is required to award to a specific recipient in accordance with Congressional direction, either through earmarked funds or appropriations acts.

NASA may award grants or cooperative agreements using three different methods: awarded on a competitive basis; awarded on a single-source basis; or awarded on the basis of an unsolicited proposal. Although competitive awards are encouraged when practicable, NASA has the authority to make awards on a non-competitive basis from single-source proposals and unsolicited proposals. The difference between single-source proposals and unsolicited proposals is that the Agency solicits proposals in single-source awards from only one recipient but does not solicit proposals when an award is based on an unsolicited proposal.

5.2 Competitive Awards

5.2.1 Synopses Requirements

1. All announcements of grant and cooperative agreement funding opportunities shall be synopsized using the standard set of data elements (enclosed), prescribed by the Office of Management and Budget (OMB). The synopsis shall be prepared in NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) or Federal Business Operations (FBO), as appropriate. Access FBO at: <https://www.fbo.gov>. Synopses shall be

electronically posted to: <http://www.Grants.gov>, no later than 3 business days after release of the full announcement.

2. All competitive solicitations that can result in the award of a grant or cooperative agreement shall be posted on NSPIRES. Procurement offices shall notify program offices issuing solicitations of the requirement to use NSPIRES. Those posting solicitations on NSPIRES shall register for an account at <https://i-nspires.nasaprs.com/internal/index.faces>. Instructions for using NSPIRES will be available through user desk guides at <https://i-nspires.nasaprs.com/tutorials/>. If additional help is needed, the NSPIRES Help Desk can be contacted at (202) 479- 9376, or by email at nspires-help@nasaprs.com.
3. This requirement applies to all announcements of grant and cooperative agreement funding opportunities with the following exceptions:
 - a. Announcements of opportunities for awards less than \$25,000 for which 100 percent of eligible applicants live outside of the United States.
 - b. Single-source announcements of opportunities that are specifically directed to a known recipient.

5.2.2 Funding Opportunity Announcements

All funding opportunities announcement (solicitations) are prepared by the cognizant technical/program office in accordance with NPR 5810 as amended, for all competitive grants. Grant Officers must announce specific funding opportunities. The announcement shall include the information specified under 2 CFR 200.203 and follow the formatting and include the standard and agency specific language, found in the template located in Appendix A of this document. Grant Officers shall use the solicitation numbering scheme stated in 5.4 for grant and cooperative agreement announcements.

To reduce administrative burden, the cognizant technical and program offices are encouraged to solicit in a manner that diminishes administrative burden, e.g., a 2016 GAO study (<https://www.gao.gov/assets/680/677949.pdf>) suggested "...postponing certain pre-award requirements until after making a preliminary decision about an applicant's likelihood of funding." This could be done in a number of ways, such as delaying detailed budgets or other elements of an application until after the application has gone through initial peer review and has received a qualifying score from reviewers.

Another potential way to diminish work by some proposers (and NASA) is to use a two-step approach for proposal submission, in which the full proposal is preceded by a mandatory abbreviated presentation of the intended research submitted either by the Authorized Organizational Representative (AOR) or the prospective Principle Investigator (PI). The two-step process can either be nonbinding, in which a Step-2 proposal may be submitted even if the preceding Step-1 was "discouraged", or binding, in which a Step-2 proposal cannot be submitted if it is not "invited". In the latter case, since not being invited is a declination, that decision must be made by a selecting official, just like any proposal declination.

As always, the funding opportunity must clearly lay out the proposal requirements, submission process, timing, and evaluation criteria. The required contents for the Step-1 and Step-2 proposals must be specified in the Funding Opportunity, including the criteria against which the Step-1 proposal

is evaluated to determine if a proposer will be encouraged or invited to submit a Step-2 proposal. For example, the Step-1 proposal may merely be a short statement reviewed by NASA to determine if the proposed research seems sufficiently relevant and responsive to the solicitation, or it may be a multipage document evaluated for Merit by a peer review. Though the Step-1 proposal is a prerequisite for submission of a full Step-2 proposal, it does not obligate the proposer to submit a Step-2 (full) proposal.

Step-1 proposals could include:

1. A description of the science goals and objectives to be addressed by the proposal
2. An explanation of how the stated science goals and objectives are relevant to the Funding Opportunity
3. A description of the methodology to achieve the goals and objectives.

The title of the proposed project, description of the proposed project and how it relates to the goals and objectives of the funding opportunity, a list of PIs and Co-PIs, and the estimated total budget cost (including any cost share).

Since Step-1 proposals are brief, determinations of which proposals will be encouraged or invited to proceed to Step-2 will more often be based on scope, relevance, and responsiveness to the funding opportunity, rather than the methodology, which generally requires greater detail to describe.

Technical offices should consult with the Office of General Counsel regarding how to respond to Step-1 proposals or required Notice of Intent (NOI) in advance of submission of the Step-2 proposal.

For Step-2 proposals the Funding Opportunity (see Appendix A) will specify:

- The process for submitting a Step-2 proposal,
- Whether or not changes to Step-1 proposals can be incorporated into the Step-2 proposal, and
- Additional documents or explanation are required to evaluate the Step-2 proposal

5.2.3 Proposals Involving Non-U.S. Organizations

NASA does not normally fund foreign research proposals from foreign organizations, nor research efforts by individuals at foreign organizations as part of U.S. research proposals. This includes subawards from US organizations to investigators at foreign organizations and also travel by individuals at foreign organizations to conduct research, fieldwork, and present at conferences. Rather, each country agrees to bear the cost of discharging their respective responsibilities (i.e., the work to be done by team members affiliated with organizations in their country). The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources by U.S. award recipients is permitted.

NASA welcomes proposals from non-U.S. organizations and proposals that include the participation of non-U.S. organizations, except as set forth in the certification regarding restriction on doing business with China. Proposals that propose research to be performed by a non-U.S. organization or with a non-U.S. organization as part of a proposal submitted by a U.S. organization are normally supported through a non-exchange of funds agreement.

This policy pertains to the nature of the proposing organization, and not the nationality or citizenship of the individuals listed in the proposal. If a proposal with a non-U.S. partner is selected, NASA will determine whether such participation should be covered by and implemented through an international agreement between NASA and the sponsoring foreign agency or funding/sponsoring institution under which the parties agree to each bear the cost of discharging their respective responsibilities.

5.2.4 Evaluation and Selection Documentation

1. The Technical cognizant office is responsible for the technical evaluation, which may be based on peer review. The Technical cognizant office must provide to the Grant Officer a completed selection package as outlined in paragraph 2. Note: documentation and grant files can be maintained in an electronic format. Grant Officers should refer to the Guidebook for Proposers for more detailed information located at <http://www.hq.nasa.gov/office/procurement/nraguidebook/>.
2. Under NRAs, AOs, BAAs, and CANs, the selecting official will furnish to the Grant Officer the documentation listed below. This package should be submitted to the grant office at least 29 calendar days prior to the requested award date, or before the expiration of the funded period in the case of the renewal of an existing effort.
 - a. A copy of the NRA, AO, BAA, or CAN or as requested just a copy of the front page of the NRA, AO, BAA, or CAN to confirm the award is made as a result of a selection under an NRA, AO, BAA, or CAN.
 - b. A copy of the proposals selected for award to include budget justification.
 - c. A copy of the selection statement and technical or peer evaluation document.
 - d. Funded procurement request, any other support documentation required for the specific award, such as protocol for animal testing, and any data deliverables that may be required when potentially hazardous operations, such as those related to flight and/or mission critical ground systems, have been proposed (e.g., Payload Safety Data Review Package).
3. If sub-recipients are stated in a proposal that has been selected for award through a competitive announcement, a separate award may be made to the proposed sub-recipients on rare occasions when NASA deems appropriate. Such grants are considered to be competed. The competitive announcement cover page, prime proposal, and its corresponding technical evaluation may be used to satisfy file documentation requirements for the sub-recipient grant.
4. For an unsolicited proposal, the technical office should submit a completed NF 884 and a justification for acceptance of an unsolicited proposal requesting financial assistance. For a single-source proposal, the technical office should submit a copy of the approved justification. (See 5.3.1 Single-source proposal and 5.3.2 Unsolicited Proposals). Sample formats of the justifications are contained in Appendix A.
5. The evaluation of the proposal budget will conform to the following procedure:
 - a. The Technical Officer will review the proposer's estimated cost for conformance to program requirements and fund availability. New budgets are not required when the program office recommended funding is within twenty (20) percent of the proposed amount, provided that, if requested by the proposer, a revised scope- of-work based on

the recommended funding is submitted by the proposer for acceptance by the Technical Officer. However, when funding decreases in equipment and/or sub-contracts are involved, the cognizant program office is required to identify the cost element(s) affected by the change in funding level.

- b. The Grant Officer will review the budget and any changes made by the Technical Officer to identify any item that may be unallowable under the cost principles, or that appears unreasonable or unnecessary. Requests for details from the recipient should be limited to the minimum necessary to conduct the review.
 - c. The Grant Officer will address requests for direct charge of equipment in the negotiation summary, and state whether the purchase is approved as a direct cost.
6. If a proposal is not selected, the proposer will be notified by the selecting official in accordance with the procedures set forth in the NRA, AO, CAN, or BAA.
7. Analysis of Offeror's Cost Proposals for Cooperative Agreements with Commercial Firms. An analysis shall be performed using proposal analysis techniques found at FAR 15.404-1, as appropriate, for cooperative agreements with commercial firms in which the recipient does not share at least 50 percent of the cost or the total value of the agreement is greater than \$5 million.
8. Analysis of the budget shall be documented and maintained in the grant file.
9. Proposals for efforts that involve printing, binding, and duplicating in excess of 25,000 pages are subject to the Government Printing and Binding Regulations, No. 26, February 1990, S. Pub. 101-9, U.S. Government Printing Office, Washington, DC 20402, published by the Congressional Joint Committee on Printing. The cognizant technical office will refer such proposals to the Installation Central Printing Management Officer (ICPMO). The Grant Officer will be advised in writing of the results of the ICPMO review.

Grant renewals provide for continuation of research beyond the original scope, period of performance and funding levels; therefore, new proposals, certifications and technical evaluations are required prior to the execution of a grant renewal. Grant renewals will be awarded as new grants. Continued performance within a period specified under the Multiple Year Grant terms and conditions does not constitute a renewal. For research originally awarded through a competitive NRA, CAN, or other competitive announcement that has completed its period of performance, peer review of a proposal to continue the research should be accomplished prior to selecting the research grant for renewal. Renewals of such awards are considered competed. If the effort was originally awarded through an unsolicited proposal, a new justification to accept the unsolicited proposal would be required. Multiple-year grant term and conditions may be incorporated into renewals.

5.2.5 Electronic Submission

NASA discretionary grant applications must be submitted electronically, as instructed in the funding announcement. NASA will not accept other types of application submission, except when a waiver of this requirement is approved by the NASA point of contact listed in the funding announcement. The process for applying for a waiver is described in Appendix B.

5.3 Non-competitive Awards

5.3.1 Single-source Proposals

1. Single-source proposals for grants and cooperative agreements are applications for financial assistance for support of an idea, method, or approach to carry out a project for a public purpose that is relevant to NASA's Mission. Single-source proposals are submitted in response to a cognizant technical office's request made only to the proposing organization. A single-source proposal must not resemble the substance of a current or pending competitive NASA solicitation and should include sufficient technical and cost detail to persuade NASA that the project represents a worthwhile approach to satisfy the criteria below:
 - a. The proposing organization has unique qualifications or
 - b. The circumstances surrounding the proposed project necessitate the use of a non-competitive grant or cooperative agreement award.
2. Peer review of proposals is always preferred. All single-source proposals will be thoroughly reviewed by NASA before award. Proposals exceeding the Simplified Acquisition Threshold as set by the Federal Acquisition Regulation (FAR) at 48 CFR Subpart 2.1 must be evaluated by at least three peer reviewers. Due regard for conflicts of interest and protection of proposal information is always part of the process.
3. In support of the selection of a single-source proposal, the NASA cognizant technical office shall prepare a written Justification for a Single-source Grant or Cooperative Agreement that thoroughly addresses the following items:
 - a. Specific identification of the document as a "Justification for a Single-source Grant or Cooperative Agreement Action
 - b. Identification of the NASA funding sponsor
 - c. Identification of the intended recipient (to include the legal name of the institution, entity, or individual; the name of the principal investigator; and the recipient's address).
 - d. A concise description of the proposed project.
 - e. Total anticipated project budget
 - f. Period of performance
 - g. A statement as to whether this is a new project or a continuation of an existing project.
 - h. A demonstration that (1) the proposed recipient's unique qualifications or (2) the circumstances surrounding the proposed project necessitate the use of a non-competitive grant or cooperative agreement award.
 - i. The NASA Technical Officer's certification and signature stating that the justification is accurate and complete to the best of their knowledge and belief.
 - j. Concurring signature can be at a level above the Technical Officer. However, this concurring signature is not required for individuals at a division chief or higher level, or those who have been designated as a selecting official.

Each single-source grant or cooperative agreement action shall also be subject to the policies, procedures, concurrences, and/or approvals established by the NASA funding sponsor's organization

and/or Center.

5.3.2 Unsolicited Proposals

1. Unsolicited proposals for grants and cooperative agreements are applications for financial assistance for support of an idea, method, or approach to carry out a project for a public purpose that is relevant to NASA's Mission. Unsolicited proposals are not submitted in response to a formal or informal NASA solicitation, but must be submitted via NSPIRES, as described in 4 a, below. Offerors considering preparing an unsolicited proposal should refer to NASA's Guidance for the Preparation and Submission of Unsolicited Proposals, which can be found on the [NASA Grants and Cooperative Agreements webpage](#) or the NSPIRES [page for unsolicited proposals](#).
2. Circumstances for return without review:
 - a. NASA may return without review any unsolicited proposal that falls within the scope of a current solicitation or one that is planned for the near future. Before expending effort preparing a proposal, potential proposers should review the solicitations at <http://solicitation.nasaprs.com/open> to determine whether there is a solicitation to which the proposal could be submitted.
 - b. NASA also will return without review any proposal that is not relevant. Before expending effort preparing a proposal potential proposers should review the current version of the NASA Strategic Plan and documents from the specific directorate, office, or program within NASA (e.g., [the Science Plan](#), [Space Technology Roadmaps](#)) to determine if the work planned is sufficiently relevant and closely related to current goals to warrant a formal submission.
 - c. NASA may return without review any unsolicited proposal that does not contain adequate detail to evaluate the criteria.
3. NASA may accept an unsolicited proposal only if it meets all of the following criteria (see the Guidebook for Proposers, Section C.2 Evaluation Criteria):
 - a. Is of high scientific and/or technical merit
 - b. Is relevant to NASA
 - c. The proposed costs are reasonable and realistic.
 - d. Proposer could not have submitted a responsive proposal to a current or pending competitive NASA solicitation, see paragraph 2.
4. Submission of unsolicited proposals
 - a. All unsolicited proposals must be submitted via NSPIRES by creating a proposal in response to the unsolicited proposal response structure at <http://solicitation.nasaprs.com/>.
 - b. NASA Headquarters and each NASA field installation shall designate at least one point of contact for receiving and coordinating the handling and evaluation of unsolicited proposals. NASA will not accept for formal evaluation unsolicited proposals initially submitted to another agency or to the Jet Propulsion Laboratory (JPL) without the offeror's express consent.

- c. Each Center shall establish procedures for handling proposals initially received through NSPIRES. Points of contact are also responsible for providing guidance to potential offerors regarding the appropriate NASA officials to contact for general mission-related inquiries or other pre-proposal discussions.
- 5. Evaluation of unsolicited proposals
 - a. Peer review of proposals is always preferred and it is required as described in paragraph 2 in Section 5.3.1.
 - b. Any proposal considered for funding must be evaluated based on the criteria given in paragraph 3 in Section 5.3.2.
- 6. Selection or Declination of Unsolicited Proposals
 - a. Peer review of proposals is always preferred and it is required as described in paragraph 2 in Section 5.3.1.
 - b. If an unsolicited proposal is selected for funding, a justification shall be provided by the program office that thoroughly addresses the criteria in Section 5.3.1 (paragraph 2) and the circumstances surrounding the proposed project that necessitate the use of a non-competitive grant or cooperative agreement award.
 - c. If an unsolicited proposal is selected for funding, a justification shall be provided by the program office that thoroughly addresses the criteria in Section 5.3.1 (paragraph 2) and the circumstances surrounding the proposed project that necessitate the use of a non-competitive grant or cooperative agreement award.
- 7. Whether an unsolicited proposal is selected or declined, NASA will notify the proposer of the decision in writing in a timely manner. Whenever practicable, the evaluations that formed the basis of the decision, or a summary of those evaluations, shall be provided to the proposer in writing. Notifications will be made and evaluations should be provided via NSPIRES, but may also be communicated by other methods.

5.3.3 Grant and Cooperative Agreement Renewals

- 1. Renewals are new non-competitive awards that provide for continuation of successful currently supported projects beyond the original period of performance and funding levels.
 - a. Renewals support the same work, or work that is a natural extension of and closely related to current work, not new projects unrelated to the predecessor award.
 - b. Renewals differ from extensions, as described in Section 6.4 Administrative Changes and Supplements, since renewals are new awards. Continuation within the original period specified under a Multiple Year Grant or Cooperative Agreement does not constitute a renewal.
 - c. Renewals generally are longer duration awards, as opposed to shorter term lengthening of existing work, which can be achieved through extensions described in Section 6.4 Administrative Changes and Supplements.
 - d. The start date of the renewal award should be instituted concurrent with the original expiration date so that the support is continuous and there is no break in funding. As new proposals, certifications, and technical evaluations are required prior to the execution of a renewal.

2. Renewals will be justified as single-source proposals as described in 5.3.1, with the following exceptions:
 - a. For awards that are derived from previously solicited competed proposals, the requirements for justification are:
 - i. A determination that the work is still meritorious.
 - ii. A determination that the work is still relevant.
 - iii. A determination that the costs are reasonable and realistic.
 - iv. An explanation of why the work should be renewed rather than recompeted, e.g., relating to long-term continuity.
 - v. This type of justification may only be used once to renew grants that have been previously competed.
 - b. Renewals of efforts that have been previously competed may resemble the substance of a current or pending competitive NASA solicitation. However, renewals of efforts that have not been previously competed cannot resemble the substance of a current or pending competitive NASA solicitation.
 - c. Renewals of previously non-competitive awards must satisfy the requirements in 5.3.1 and 5.3.2. In addition, these justifications must address: (1) why the renewal is necessary, and (2) why, if NASA decided to support the work previously, the work was not subsequently incorporated into a solicitation.
 - d. Higher scrutiny will be given when an effort is renewed more than one time.

5.4 Format and Numbering

1. NASA Form 1687 is the cover page for all grants. Terms and Conditions for grants with U.S. organizations shall be incorporated by reference. Full text of the terms and conditions are located in Appendix D of this manual. Terms and conditions for grants with foreign organizations will be printed in full text. An acceptance block may be added when the Grant Officer finds it necessary to require bilateral execution of the grant. Program budgets are not generally attached to the award document. When it is necessary to attach the budget due to revisions to the original proposed budget or other reasons, this information should be suitably marked as confidential, and is not to be disclosed outside the Government without the consent of the grantee.
2. Grants and cooperative agreements will be sequentially numbered. In accordance with 2 CFR 200.210 titled Information contained in a Federal award, Federal awards must include a unique Federal Award Identification Number (FAIN). All Grants and Cooperative Agreements for all new NASA awards shall be 13 digits in length. The Identification Numbering System to be used for all types of NASA grants and cooperative agreements will be applied as follows:

Agency Prefix: NASA is represented by 80.

Center: The Center is represented by four characters.

Fiscal Year: Current Fiscal Year (FY) will be represented by two digits.

Grant or Cooperative Agreement: Grant is coded K and Cooperative Agreement is coded M.

FAIN “80NSSC17K0001” would be a NSSC grant action signed in FY17. It would be the first one issued at the Center.

80	NSSC	17	K	0001
NASA	Center	FY17	Grant	Serial No. 1

5.5 NASA Catalog Federal Domestic Assistance (CFDA) Structure

Grant officers and/or sponsoring organizations shall enter the applicable CFDA number, as set forth in the CFDA/Treasury Account Symbol (TAS) cross-walk table provided herein, when creating pre-award synopses/BAA's for all new grant or cooperative agreement funding opportunities on Grants.gov. For all new BAAs that may result in the award of a grant or cooperative agreement, the sponsoring organization shall post the applicable Agency CFDA number in the Grants.gov synopsis for that particular announcement. Some BAAs can result in the award of a grant, cooperative agreement, or contract; however, CFDA is not applicable to NASA contracts. Therefore, if the BAA results in the award of a contract, the CFDA number will not be used post award. If more than one funds source/CFDA number is associated with the action, the CFDA number associated with the highest percentage funds source should be cited. Below is a chart of the NASA CFDA numbers.

TITLE	TREASURY ACCOUNT SYMBOL	CFDA NUMBER
Science	80 0120	43.001
Aeronautics	80 0126	43.002
Exploration	80 0124	43.003
Space Operations	80 0115	43.007
STEM Engagement	80 0128	43.008
Cross Agency Support	80 0122	43.009
Construction and Environmental Compliance &	80 0130	43.010
Space Technology	80 0130	43.012

5.6 Length of Award

Period of performance: Typically, the duration of an award does not exceed 5 years unless in the best interests of the government or otherwise specified by program unique needs, policies or procedures. However, grants that will exceed \$5 million and have a period of performance in excess of 5 years shall require the approval of the HQ OCFO, Director of Policy prior to award. Requests for approval are not required when the 5-year limitation is exceeded due to a no-cost extension.

1. Grants with periods of performance in excess of 5 years may be appropriate when the NASA technical office determines at the inception of the grant that a longer period of performance would be in the interest of NASA and more conducive to the effort. Requests for approval shall include a justification for exceeding 5 years and evidence that the extended years can be

reasonably estimated. Awards exceeding 5 (funded) years in duration shall also be subject to the policies, procedures, concurrences, and/or approvals established by the NASA funding sponsor's organization and/or Center.

- a. If the decision to provide multiple year funding to a proposal is made, the terms and conditions in Appendix D20, Multiple Year Grant or Cooperative Agreement, will be included in the award.
- b. Periods approved under the Multiple Year Grant or Cooperative Agreement term and condition and funded at the levels specified in the term are not considered to be new awards. Therefore, new proposals, new proposal certifications, new technical evaluations and new budget proposals are not required. However, certifications will be required if necessary to implement new restrictions in appropriations that were not in existence at the time of the original award.
- c. If NASA program constraints or developments within the project dictate a reduction in the funding level specified under a Multiple Year Grant period, work may continue at the reduced level under the terms and conditions; however, the recipient may rebudget under the grant terms and conditions to keep the project within the funding actually provided.

5.7 Funding

1. NASA may support a grant as outlined in the proposal budget, or may offer to fund only selected tasks, or all tasks for a shorter duration (e.g., a one-year pilot study) or a combination.
2. For multiyear awards NASA may provide support in increments (e.g., by fiscal year to diminish uncosted carryover) or may provide support for more than one year or provide support for the total award in advance.
3. Regarding incremental funding:
 - a. When funding incrementally by fiscal year, NASA should provide at least one month of funding from the prior fiscal year that carries into the subsequent fiscal year.
 - b. NASA should minimize incremental funding actions; small increments (<\$25K) should be avoided when practical.
 - c. The provision for Incremental funding as outlined in Appendix D21 will be included in any grant that is incrementally funded. The Grant Officer will determine the number of incremental funding actions that will be allowed.
4. For awards funded in advance for future years, progress reports are still required and shall be reviewed by the NASA point of contact. Grant Officers should be aware that funds may expire and will no longer be available to grantees at the end of long awards (31 USC §1552). If the effect is to provide a guaranteed customer base for new commercial space hardware or services, 51 U.S.C. 30301 prohibits NASA from funding a grant for longer than one year. The only exception is if an Appropriations Act specifies the new commercial space hardware or services to be used.
5. While NASA normally provides full funding support for research grants, alternate methods of grant funding are as follows:
 - a. Since NASA grant recipients usually gain no measurable commercial or economic

benefit from grants, other than conducting research, cost sharing for research grants is not generally required. NASA may, however, accept cost sharing when voluntarily offered. Additionally, in instances when the Grant Officer determines that the recipient will benefit from the research results through sales to non-Federal entities, cost sharing based upon this mutuality of interest will apply. When cost sharing is used, the Grant Officer shall insert the term as shown in Appendix D22. (See 14 CFR Part 1274.204 (b) for grants and cooperative agreements with commercial organizations involving cost sharing.)

- b. NASA may provide partial support for a research project or conference where additional funding is being provided by other Federal agencies. If the grant also involves cost sharing by the recipient, the Grant Officer will ensure that the recipient's share does not include any Federal funds.

5.8 Review of Risk Associated with the Proposer

The Grant Officer will conduct a pre-award review of risk associated with the proposer as required by 2 CFR 200.205. For all proposals selected for award, the Grant Officer will review the submitting organization's information available through the Federal Awardee Performance and Integrity Information System (FAPIIS) and the System for Award Management (SAM) to include checks on entity core data, registration expiration date, active exclusions, and delinquent federal debt.

In addition to the FAPIIS and SAM information, the review of risk associated with the proposer will also consider the technical/peer evaluation based on the selection criteria contained in the announcement. Further risk review may be conducted at the discretion of the Grant Officer for applications over the Simplified Acquisition Threshold when an OMB repository indicates that:

1. An applicant is not low risk,
2. The applicant is not known to the grants officer, or
3. The applicant has not received a previous Federal award from NASA.

In such situations, the Grant Officer also may evaluate the organization's financial stability, history of performance if available, and/or audit reports and findings. When appropriate, the Grant Officer may add specific conditions to the award document that correspond to the assessed risk.

5.9 Budget Analysis

The recipient institution is responsible for ensuring that costs charged are allowable, allocable, and reasonable under their applicable cost principles set out in 2 CFR 200 for education organizations, non-profit organizations, state governments, local governments and tribal governments and FAR Subpart 31 for commercial firms. Fee is not allowed. Grant officers will conduct and document a budget analysis of the proposed work. The purpose of the analysis is to determine that all proposed costs are allowable, allocable, and reasonable under the applicable cost principles either in 2 CFR 200 or FAR Subpart 31. Proposals for multiple year grants shall describe the entire research project and include a complete budget for year one, separate estimates for each subsequent year, and cumulative budget for the entire period. Recipient should submit proposal budgets and detail in accordance with Proposer's Guidebook (<https://www.hq.nasa.gov/office/procurement/nraguidebook/>). This should minimize requests for detail from the recipient. An Example of different cost categories from 2 CFR 200 Subpart E may be found in Appendix F. During the analysis, the grant officer should review any recommendations for or changes made to the proposed budget by the technical officer.

NASA does not allow the payment for profit or fee through grant awards.

When the use of vehicles is determined necessary to accomplish the proposed work, the vehicles should be leased from a non-Federal entity.

5.10 Terms and Conditions

5.10.1 Terms and Conditions in Award Document

1. Unless otherwise specified, the terms and conditions outlined in Appendix D1 through D20 apply to all grants and any cooperative agreements issued to educational institutions and non-profit organizations. Additionally, the following requirements apply to all grants:
 - a. 2 CFR Part 170, Reporting Subaward and Executive Compensation Information;
 - b. 2 CFR Part 175, Award Term for Trafficking in Persons; and
 - c. 2 CFR 182, Government-wide requirements for Drug-Free Workplace.
 - d. The grant officer shall reference these terms and conditions and requirements by including the following statement in all award documents: Unless otherwise specified, the terms and conditions in Appendix D of the GCAM and the requirements in 2 CFR 170, 175, and 182 apply and are incorporated by reference.
2. The grant officer shall also indicate other terms and conditions in Appendix D of the GCAM that apply by including the provision's number and name in the award document.
3. The grant officer must include any provision in full text in the award document if
 - a. The provision is different from that which is referenced in Appendix D, e.g., is on a "substantially the same as" basis, or
 - b. The provision is a programmatic or special condition required for the specific grant.
 - c. The grant officer determines it is appropriate to include a provision in full text.
4. For grants to foreign institutions, the following terms and conditions must be developed with the assistance of legal:
 - a. Payment to foreign organizations
 - b. Customs clearance and visas
 - c. Taxes
 - d. Exchange of technical data and goods
 - e. Choice of Law

In addition, the other terms and conditions in Appendix D must be reviewed to determine whether they should be modified

5. Grant officers shall also include the following terms and conditions when applicable:
 - a. Cross-Waiver of Liability for International Space Station Activities
 - b. Cross-Waiver of Liability for Science or Space Exploration Activities Unrelated to the International Space Station

- c. Personal identity verification of recipient personnel
- d. Restrictions on the Use of the NASA Seal, Insignia, Logotype, Program Identifiers, or Flags

Appendix D contains the text of these terms and conditions and prescribes when these terms and conditions apply.

5.10.2 Research Terms and Conditions (RTC)

1. When a new or renewal NASA Research Grant or Cooperative Agreement is applicable to 2 CFR 1800, as designated on the cover sheet NF1687, PPS will include the Research Terms and Conditions (RTC). The side-by-side RTCs depict pertinent sections of the Uniform Guidance and clarifications for research and research-related awards together on the same document.
2. In addition to the RTCs, three companion resources Appendix A, Prior Approval Matrix, Appendix B, Subaward Requirements Matrix, and Appendix C, National Policy Requirements Matrix are posted on the NSF website at: <http://www.nsf.gov/awards/managing/rtc.jsp>. The RTCs include flexibility and NASA has provided clarification through the incorporation of Appendices A – C and Agency-Specific Requirements.
3. The RTCs do not apply to awards issued under 14 CFR 1274.

5.10.3 Deviations

1. A deviation is required for any of the following
 - a. When a prescribed term or condition set forth verbatim in the GCAM is modified or omitted.
 - b. When a term or condition is set forth in the GCAM, but not for use verbatim, and the Center substitutes a term or condition which is inconsistent with the intent, principle, and substance of the term or condition.
 - c. When a form prescribed by the GCAM is altered or another form is used in its place.
 - d. When limitations, imposed by 2CFR 1800 or the GCAM upon the use of an award term or condition, form, procedure, or any other award action, are changed.
 - e. When a form is created for recipient use that constitutes a “Collection of Information” within the meaning of the Paperwork Reduction Act (44 U.S.C. 35) and its implementation in 5 CFR part 1320.
2. Requests for authority to deviate from the GCAM shall be submitted, by appropriate NASA staff, to the OCFO Policy Division, NASA Headquarter. Requests signed by the designated Approving Official:
 - a. A full description of the deviation, the circumstances in which it will be used, and identification of the requirement from which a deviation is sought;
 - b. The rationale for the request, pertinent background information, and the intended effect of the deviation;
 - c. The name of the recipient, identification of the award affected, and the dollar value;

- d. A statement as to whether the deviation has been requested previously, and, if so, details of that request; and
 - e. A copy of legal counsel's concurrence or comments.
3. Where it is necessary to obtain an exception from 2 CFR Part 200, the OCFO Grants Policy & Compliance Branch will process all necessary documents (See 2 CFR 200.102).

5.11 The Federal Procurement Data System

Grant officers or their delegates are required to enter all grant and cooperative agreement awards and all supplements into the Federal Procurement Data System (FPDS) in accordance with the highlighted data fields on the input screen. When completing the description field, the e- Government Act requires Federal agencies to provide a "meaningful" description of the research or project being funded. For this guidance, a meaningful description is one that sufficiently demonstrates the general purpose or nature of the NASA-sponsored research or project. In addition, Grant Officers or their delegates are required to complete the following FPDS data fields:

1. Field of Science or Engineering
2. Principal Investigator
3. Installation Unique - The Catalog of Federal Domestic Assistance (CFDA) number shall be entered in the 'Installation Unique' field. For every grant and cooperative agreement award, there must be a corresponding NASA CFDA number identified; a null value is not a valid option

5.12 Distribution

1. Distribution may be done electronically
2. Copies of grants and supplements should be provided to:
 - a. Payment offices (original copy)
 - a. Technical Officers
 - b. Administrative Grant Officers if delegated
 - c. NASA Scientific and Technical Program (STI) Program; and
 - d. Other appropriate offices as determined by the Grant Officer
3. In addition to receipt of grants and supplements, the administrative Grant Officer will receive a copy of the approved budget.
4. The file will record the addresses for distribution.

6.0 Post-Award Procedures

6.1 Administration

6.1.1 Technical Review

The Technical Officer is responsible for the review of all technical reports required to be delivered under the grant or cooperative agreement. See Publications and Reports, Appendix E. If the review indicates satisfactory technical performance, the award continues and the Technical Officer releases the next increment of funds if required by the grant. If the review indicates technical performance is unsatisfactory, NASA must communicate with the recipient. Subsequent actions may include:

1. Redefinition of research
2. Recommend the Grant Officer add specific conditions in accordance with 2 CFR 200.207
3. Recommend future increments not be provided to the recipient in accordance with Appendix D21.
4. Recommend remedies up to and including termination of the award in accordance with 2 CFR 200.338 and 339

6.1.2 Public Release of Scientific and Technical Information (STI) by NASA

1. The Technical Officer must obtain Document Availability Authorization (DAA) before STI can be:
 - a. Publicly released by NASA,
 - b. Publicly released at the direction of NASA, or
 - c. Presented by NASA or at the direction of NASA any event at which foreign nationals may be present.

The Center STI/Publication Manager shall forward the approved STI and a copy of the approved DAA form to Scientific and Technical Information Program Office (STIPO) per NPR 2200.2, Appendix C, and notify the Technical Officer.

2. Centers shall establish procedures for notifying the grantee or cooperative agreement recipient if and when the STI has been approved for publication by NASA. Generally, this notification is provided by the office responsible for approval of the DAA or the Center STI/Publication Manager.
3. DAA is not required from grantee or cooperative agreement recipients for release of information (such as presentations, publications, reports, webpages, etc.) unless specified in the terms and conditions of the award. Of course, the recipient is required to follow statutes and regulations on export control when releasing information.
4. In response to a 2013 request from the White House Office of Science and Technology Policy, directing science-funding agencies to develop plans to increase access to the results of federally funded research. NASA has partnered with Department of Health and Human Services (HHS) to allow NASA-funded authors and co-authors to deposit as-accepted manuscript versions of their peer-reviewed articles from scientific journal publications and associated data into a publication repository. NASA is using PubMed Central (PMC) to permanently preserve and provide easy public access to the peer-reviewed papers resulting from NASA-funded research. Beginning with research funded in 2016, all NASA-funded authors and co- authors (both civil servant and non-civil servant) will be required to deposit copies of their peer-reviewed scientific publications and associated data into NASA's publication repository called NASA PubSpace. This EXCLUDES patents, publications that contain material governed by personal privacy, export control, proprietary restrictions, or national security law or regulations. NASA PubSpace is part of PMC which is managed by the National Institute of Health (NIH).

6.1.3 Methods of procurement

1. Micro-purchase Threshold. The non-Federal entity must use one of the methods of

procurement as prescribed in 2 CFR 200.320 (A). As defined in 2 CFR 200.67, the micro-purchase threshold for acquisitions of supplies or services made under grant and cooperative agreement awards is —

- a. 10,000; or
 - b. As set by 48 CFR Subpart 2.1 FAR or
 - c. Such higher threshold as determined appropriate by the head of the relevant executive agency and consistent with audit findings under chapter 75 of Title 31, United States Code, internal institutional risk assessment, or State law.
2. Simplified acquisition threshold. The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320(B). As defined in 2 CFR 200.88, the simplified acquisition threshold for acquisitions of supplies or services made under grant and cooperative agreement awards is —
- a. \$250,000; or
 - b. As set by 48 CFR Subpart 2.1 FAR; or
 - c. Such higher threshold as determined appropriate by the head of the relevant executive agency and consistent with audit findings under chapter 75 of Title 31, United States Code, internal institutional risk assessment, or State law.

6.2 Delegation of Administration

1. The Grant Officer retains the grant administration functions at NASA except: (1) when a grant or cooperative agreement is awarded with Government-furnished property; (2) when the government retains title to recipient acquired property; or (3) as set forth in paragraphs 2 and 3 below.
2. When the grant or cooperative agreement is awarded with Government-furnished or recipient acquired Government property, the Grant Officer must delegate the Property Administration Function to Office of Naval Research (ONR) for grants to educational institutions and non-profit organizations.
3. As of 1 Oct 2017, the Department of Interior (DOI) has been given the responsibility of determining and approval of the indirect rates for NASA cognizant organizations.

DOI Contact Information: Interior Business Center

650 Capitol Mall, Suite 7-400

Sacramento, CA 95814-4706

Phone 916-930-3803 Fax 916-930-3804

US Department of the Interior Office of the Secretary

<https://www.doi.gov/ibc/services/finance/Indirect-Cost-Services>

Email: ICS@IBC.DOI.Gov

4. Delegation of grant administration to ONR shall be made by use of NF 1430, 1430B, 1430C, 1430D and 1431 (<https://itcdweb.hq.nasa.gov/eforms>). The type of administrative functions that are delegated should be consistent with the memoranda of understanding (MOAs)

between NASA and DOD and between NASA and ONR. Examples of administration functions delegated for previous awards include:

- a. Property administration and plant clearance system reviews (PCSRs) and Property Control System Analyses (PCSAs)
 - b. Quality Assurance, Engineering Support and Safety Engineering
5. When administration duties have been assigned to ONR, the NF 1430, 1430B, 1430C, 1430D and 1431, the award document, supplements, and any relevant property documentation and the approved budget will be sent to ONR and NSSC in a single package (electronically, when possible).
6. Upon acceptance of a delegation, ONR agrees to follow Department of Defense (DoD) property administration policies and procedures, as well as the following NASA requirements:
 - a. The recipient shall maintain property records and manage non-expendable personal property in accordance with 2 CFR 200. During PCSA, ONR, will check the recipient's understanding and test compliance of property management requirements, including the accuracy of recipient property reports. ONR will provide one copy of each PCSA Report to the appropriate NASA center industrial property officer.
 - b. ONR will investigate and notify NASA as appropriate for any unauthorized property acquisitions by the recipient. See the provision in Appendix D7.
 - c. ONR will notify the cognizant Grant Officer and industrial policy officer when property is lost, damaged or destroyed.
 - d. Under no circumstances will Government property be disposed without instructions from NASA.
 - e. Before disposition, except when returned to NASA or reutilized on other NASA programs, ONR will ensure all NASA identifications are removed or obliterated from property, and computer hard drives are cleared of sensitive or NASA owned/licensed software/data.

6.3 Change of Principal Investigator or Recipient Institution

1. When a principal investigator changes organizational affiliation, the current recipient institution is given an opportunity to find a replacement. The final decision on whether an acceptable replacement is available, or that the research effort should follow the original principal investigator to the new location, is at the discretion of the NASA technical Officer. Grant Officers should process a potential change of principal investigator as follows:
 - a. If the decision is made that the grant will not follow the PI to the new institution, and the current institution does not recommend a substitute for NASA approval, the grant with the current institution is ended by mutual consent or, if necessary, unilaterally by the Grant Officer.
 - b. If the decision is made that the grant will not follow the PI to the new institution, and the current recipient institution does recommend for NASA approval a new PI, the Grant Officer will seek concurrence/non-concurrence from the Technical Officer. The current recipient shall provide a PI Vitae and any other documentation that might aid in the evaluation of the new PI submission by NASA. Upon Technical Officer

concurrence of the recommendation, the Grant Officer may initiate a supplement to change the PI. If the Technical Officer does not concur with a recommended new PI and the grant will not follow the PI to the new institution, then the grant with the current institution may be ended by mutual consent or, if necessary, unilaterally by the Grant Officer.

- c. If the decision is made that the research activity will follow the PI to the new institution and the funds on the grant are still available, the grant with the current institution may be ended and a replacement grant issued to the new institution. When the termination/new award process is used, a fully endorsed proposal for a replacement grant will be requested from the PI's new institution to continue the research. Although such a proposal will be reviewed in the normal manner, every effort will be made to expedite a decision. Regardless of the action taken on the new proposal, final reports on the original grant, describing the scientific progress and expenditure to date will be required.
 - i. When transferring research activities, the Grant Officer performs steps for a new award normally taken at their Centers, such as determination of appropriate funding for the original institution, receiving in writing the intent of the original institution to relinquish the grant, de-obligating any remaining funds from the original grant with the original institution, ensuring sufficient funds are available for the new institution's proposal, and updating records or files.
 - ii. Following a review and evaluation of the proposal from the new institution by the program office, if the proposal is accepted, the Technical Officer will forward a recommendation to the Grant Officer to award to the new institution.
2. The evaluation and recommendation from the Technical Officer for the transfer of the research activity to the new institution must include:
 - a. Verification that the PI changing institutions still has the prerequisite scientific and/or technical expertise, and knowledge of the research activity (as supported by the basis for the original award to the PI's old institution);
 - b. Verification that the new institution has the necessary facilities and support to continue the original research;
 - c. Statement from the Technical Officer verifying that NASA is satisfied with the scientific and/or technical progress of the current PI;
 - d. Statement, with supporting rationale, that it will not be cost effective nor time efficient to recompute the effort, and that it is not likely NASA will realize any benefit by recompeting the research activity; and
 - e. Identification of the suggested amount of unexpended research funding to be transferred from the initial recipient institution to the PI's new institution.

Grants involving a transfer to another institution do not need to be re-advertised and there is no requirement to perform a market research analysis or market survey. After receiving approval of the new institution's proposal from the Technical Office, and coordinating with the Center Chief Financial Officer (CFO) on the intended new award to include verification that sufficient funds are available, the contracting or Grant Officer may make the award to the new institution.

6.4 Administrative Changes and Supplements

1. Requests by the recipient to have a grant modified should be in writing to the Grant Officer.
2. Supplements are administrative award documents (NF 1687) used to effect modifications to grants and cooperative agreements. Types of supplements include the following:
 - a. No-cost Extensions (NCE): A supplement used to extend the grant beyond the expiration date at no additional cost to the government. No-cost extensions NCE are awarded when additional time beyond the established period of performance is required to assure adequate completion of the original scope of work within the available funding. A first no-cost extension can be issued by the recipient. (See Appendix D3 - Extensions). Special note: NCEs may include funding when incremental funding balance of the year ending is still due.
 - b. Funded Extensions: A supplement used to extend the grant beyond the expiration date and that would require additional funding. Funded Extensions must be supported by a proposal and new technical evaluation submitted at least three months in advance of the expiration date (See Provision in Appendix D3).
 - c. Administrative Supplements: A supplement used to enact administrative revisions to the grant. Examples of such revisions are PI Changes (See Appendix D5 - Change in principal investigator or scope), Technical Officer Changes, and general corrections. A NASA Grant Officer can unilaterally make minor or administrative changes to a grant.
 - d. Incremental Funding Supplements: A supplement used to obligate funding in furtherance of the original scope and total award amount (history) of the approved proposal. (Appendix D23 - Incremental Funding)
 - e. Augmentations: A supplement used at any time when work is introduced which is outside the scope of the approved proposal or when there is a need for substantial unanticipated funding. The Grant Officer must first determine whether the augmentation requires a separate approval as a non-competitive addition to the scope of the effort to be performed under the grant. Augmentations require the submission of revised budget proposals and technical evaluations covering the additional effort. Since augmentations will be performed within the existing period of performance, certifications will not normally be required.
 - f. Combination of the above.
 - g. Change of recipient institution (PI Transfer): Includes a supplement to end the original award. (See 6.3 Change of PI or change of recipient institution (PI Transfer)).

6.5 Novation and Change-of-name Agreements

Novation and change-of-name agreements are administrative actions requiring the involvement of the Grant Officer. Novation's are legal instruments under which obligations of an organization, (including the performance of grants), are assumed by a new organization arising out of a transfer of assets, usually as a result of a merger or acquisition by the new organization. Change-of-name agreements are legal instruments executed by an organization and NASA that recognizes the legal change of name of the organization without disturbing the original rights or obligations of the parties. Procedures for completing novation and change-of-name agreements are the same as those set forth at FAR Subpart 42.12. All novation agreements and change-of- name agreements of the recipient, prior

to execution, shall be reviewed by legal counsel for legal sufficiency.

6.6 Approval of Equipment

1. This section applies to both the purchase of equipment by the recipient and the request for NASA to provide government owned equipment. As with all budget requests the recipient must demonstrate and justify the need for the requested equipment.
2. Grant Officers shall conform with the following procedures to approve acquisition of equipment (these procedures apply to pre-award and post-award requests for equipment)
 - a. In accordance with 2 CFR 200, prior approval of equipment acquisitions by the NASA Grant Officer is required for both special and general-purpose equipment with a unit cost over \$5,000 (unless a lower threshold has been established by the recipient). Grant award constitutes approval for any equipment provided and was requested in the original proposal. When two or more components are fabricated into a single coherent system in such a way that the components lose their separate identities, and their separation would render the system useless for its original purpose, the components will be considered as integral parts of a single system.
 - b. Requests by grant recipients for the acquisition of equipment with a unit cost over \$5,000 (unless a lower threshold has been established by the recipient) shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment. (A change in the model number of a prior approved piece of equipment does not require re-submission for approval.)

6.7 Exempt Equipment

Exempt equipment includes a system with a recipient-owned component (2 CFR 200.312). The requirement for agreement regarding NASA's retention of its option to take title shall apply where it is expected that one or more recipient-acquired components costing \$5,000 or less will be fabricated into a single system costing in excess of \$5,000. However, an item that is used ancillary to a system, without loss of its separate identity and usefulness, will be considered as a separate item and not as an integral component of the system.

6.8 Federal Funding Accountability and Transparency Act (FFATA of 2006)

Agencies are responsible for quarterly verification of recipient reports in FFATA Subaward Reporting System (FSRS). Ultimately, this is a Grant Officer responsibility, but Centers may elect to have other individuals or teams undertake the quarterly verification. The verification is limited to ensuring consistency with grant and cooperative agreement information that is readily available to the Grant Officer. The review is necessary because the integrated system will cross-check recipient entries against Federal Procurement Data System - Next Generation (FPDS-NG) data and any anomalies will require correction by either the recipient or the Grant Officer. Examples of data fields that Grant Officers must verify include:

- Grant/Cooperative Agreement Number
- Awarding Agency Name (NASA)
- Awarding Agency Code (8000)

- Funding Agency Name (NASA)
- Funding Agency Code (8000)
- Treasury Account Symbol (TAS)
- Applicable Agency CFDA Number

The prime recipient's reporting requirements include many data elements that Grant Officers will not know and, therefore, are not responsible for verifying, such as:

- Whether a first-tier subaward has been issued,
- Whether a reported first-tier subaward value, place of performance, etc., is accurate, or
- Whether a prime recipient or first-tier subaward meets the thresholds or qualifies under an exemption to executive compensation reporting.

Grant Officers must follow this guidance for all new NASA grants and cooperative agreements awarded on or after October 1, 2010, under which the total Federal funding will be equal to \$25,000 or more at any time during the term of the grant or cooperative agreement.

6.9 Catalog of Federal Domestic Assistance Numbers

1. For reporting purposes under the Transparency Act and 2 CFR 200, Subpart F, Audit Requirement, Grant Officers shall convey the assigned CFDA number to recipients using wording similar to that suggested below. The suggested wording for conveying the CFDA number to recipients is included in the Procurement for the Public Sector clause templates for grants and cooperative agreements. Grant Officers shall convey the assigned CFDA number to the recipients retrospectively, by email, fax, or regular mail. If more than one funds source/CFDA number is associated with a given action, the CFDA number associated with the highest percentage funds source should be selected.
2. Grant Officers shall “select” the applicable Agency CFDA number from the drop- down list when entering grant or cooperative agreement awards in PRISM/CMM, as set forth in the CFDA/TAS cross-walk table provided in Section 5.4. If more than one funds source/CFDA number is associated with the action, the CFDA number associated with the highest percentage funds source should be cited. CAUTION: To ensure data quality and integrity, Grant Officers should avoid manually entering the CFDA number in PRISM/CMM; select from the drop-down menu only.
3. Grant Officers shall enter the corresponding TAS in FPDS-NG, as set forth in the CFDA/TAS cross-walk table provided in Section 5.5.
4. The NASA HQ, - OCFO Policy Division -, Contract and Grant Policy Division serves as the Agency CFDA Program Coordinator. The Agency CFDA Program Coordinator is responsible for the overall management and administration of the NASA CFDA Program. As requested by the NASA HQ Office of the Chief Financial Officer (OCFO), Budget Division, the Agency CFDA Program Coordinator is responsible for the establishment of new CFDA numbers, updates to existing CFDA numbers, and/or disposition of obsolete CFDA numbers.
5. The NASA HQ, OCFO, Budget Division is responsible for notifying the Agency CFDA Program Coordinator whenever NASA CFDA information changes are required. The OCFO is responsible for providing any financial/budget-related data that is required to the Agency CFDA Program Coordinator.

6. CFDA EXCEPTIONS: All existing Agency grants and cooperative agreements awarded prior to October 1, 2010, provided the total value of the award is not increased for any reason and by any amount, throughout the total term of the award.

7.0 Closeout Procedures

1. Grant and cooperative agreements are physically and administratively complete and ready for closeout when:
 - a. The Grant Officer has received all financial, technical, and other reports required by the terms and conditions of the grant or cooperative agreement, and has obtained all required concurrences and/or approvals;
 - b. For research grants or cooperative agreements including a Patent Rights Clause or a New Technology Clause, the Grant Officer has received concurrence from the patent counsel office regarding the recipient's Subject Inventions/Reportable Items Final Summary Report;
 - c. For those grants and cooperative agreements containing Government property and for which property administration has been delegated to the ONR, property disposition has been completed and the Grant Officer has received written notification from the ONR Administrative Grants Officer indicating that all property administration duties have been completed, via either a DD Form 1593, Contract Administration Completion Record or other equivalent electronic notification (email is an acceptable form and mechanism for this notification);
 - d. For grants or cooperative agreements awarded with provisional indirect rates see 2 CFR 200.344 (a) (2). When such grants or cooperative agreements are closed, the recipient should be notified of their obligation to return any funds due as a result of final indirect cost rate adjustments.
 - e. A final Standard Form (SF) 425 has been received; all payments have been made to the recipient; all reimbursements have been received and reconciled; and any remaining unused balance has been deobligated from the grant or cooperative agreement;
 - f. The Grant Officer has verified that a copy of all required deliverables is in the grant or cooperative agreement file.
2. Grants and cooperative agreements shall not be closed if litigation or an appeal is pending, or until the completion of a termination action.
3. Records shall be retained in accordance with 2 CFR §200.333, Retention Requirements for Records and NASA Procedural Requirements (NPR) 1441.1A, NASA Records Retention Schedules, as set forth in the NPR, grant and cooperative agreement files are generally retired to the Federal Records Center 2 years after completion of the grant or cooperative agreement, and destroy 10 years after final action is taken on file (General Records Schedules 1.2-2.0).
4. A recipient is considered non-compliant with the terms and conditions of an award when they do not provide acceptable final reports by the identified due date or an extension granted. Under these conditions, the Grant Officer shall initiate unilateral close out (close out without the cooperation of the recipient) of the award within 270 days of the due date of the final report. Unilateral closeout allows the Grant Officer to comply with the OMB requirements for

closeout.

- a. The Grant Officer shall document all contact, and attempts, with the recipient to obtain the required documents. The decision memo(s) for either the bilateral or unilateral closeout decision, made under this unilateral closeout guidance, will be kept in the official grant file.
- b. To close out an award unilaterally, a Grant Officer shall send a letter to the recipient specifying, at a minimum,
 - i. The recipient is considered non-compliant with the terms and conditions of its award because they have not provided acceptable final reports as identified in the award.
 - ii. The Center responsible for unilaterally closing out the award based on non-receipt of acceptable final reports;
 - iii. The federal funding amount at which the NASA will close the award (when the recipient has not submitted a final FFR expenditure report)
 1. For advance payments, the amount reported as “cumulative cash disbursement” in the latest federal cash report,
 2. For reimbursement payments, the total amount of payments requested before the end of the project period.
 - iv. For recipients receiving Advance payment
 1. Review the most recently submitted cash status information on item 5 of the Federal Financial Report (FFR) Attachment or, as applicable, line 10.b of the latest or final (if available) FFR, to determine the amount reported as disbursed.
 2. Compare the reported disbursement with the award amount and with any updated drawdown information obtained from the payment system.
 3. For single-award reporting of advance payments, the amount shown as “cash on hand” on line 10.c of the FFR must be repaid and is considered a debt.
 4. For multiple-award reporting of advance payments, unless substantiated by the recipient in accordance with any instructions provided by the Center, any reported drawdown or disbursement of funds attributable to the award being closed after the end of the latest federal cash reporting quarter will be treated as disallowed costs and may be appealed by the recipient.
 - v. For recipients receiving Reimbursement payment
 1. Review the latest invoice to determine the cumulative amount requested and payment records to determine the amount paid as of the end of the project period.
 2. Compare the cumulative payment requests with the latest or final (if available) FFR to determine whether the recipient has requested

reimbursement for the amount reported as spent through that reporting period.

3. If the latest invoice covers a period beyond that covered by the latest FFR, compare the amount reported on line 11.g, “Federal share of amount on line e,” with the amount reported on line 10.e, “Federal share of expenditures,” of the FFR, to determine which is greater.
4. For reimbursement payments, the difference between the amounts shown on line 10.e, “Federal share of expenditures,” on the last FFR submitted or, if greater, the amount shown latest available invoice will be treated as disallowed costs and may be appealed by the recipient.

8.0 Appendices

Appendix A – Standard Announcement format for NASA Announcements of Grants and Cooperative Agreement Funding Opportunities

Appendix B – Waiver Request Process

Appendix C – Certification, Assurances and Representations Appendix D – Terms and Conditions

Appendix E – Additional Terms and Conditions

1. Cross-Waiver of Liability for International Space Station Activities
2. Cross-Waiver of liability for Science or Space Exploration Activities Unrelated to the International Space Station.
3. Personal identity verification of Recipient Personnel.
4. Restrictions on the Use of the NASA Seal, Insignia, Logotype, Program Identifiers, or Flags.
5. Micro-Purchase Threshold.

Appendix F – Required Publications and Reports

Appendix G – Examples of Costs Categories from 2 CFR 200 Subpart E

Appendix A – Standard Announcement Format for NASA Announcements of Grants and Cooperative Agreements

NOTE - As required under NPR 5810.1A Standard Format for NASA Research Announcement and Other Announcements for Grants and Cooperative Agreements, the funding announcement shall include all information specified under 2 CFR 200.203. In order to assist program officials in writing funding announcements, this appendix has been created to provide instructions and formatting based on all of the required information in 2 CFR 200.203 and additional NASA-specific requirements.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA) Center issuing announcement Mission Directorate

Program Title and Fiscal Year

NASA RESEARCH ANNOUNCEMENT (NRA)

Type of Project (science research, etc.)

ANNOUNCEMENT NUMBER:

CATALOG OF FEDERAL DOMESTIC ASSISTANCE (CFDA) NUMBER:

OMB Control Number 2700.092 ANNOUNCEMENT TYPE:

Either initial announcement of this funding opportunity or a modification of a previously announced opportunity

ISSUED: Date Funding Opportunity Announcement issued

KEY DATES

Key dates include due dates and time for applications or Executive Order 12372 submissions, as well as for any letters of intent or pre-applications. For any announcement issued before a program's application materials are available, key dates also include the date on which those materials will be released; and any other additional information, as deemed applicable by the relevant Federal awarding agency.

Table of Contents

- A. Program Description—Required**
- B. Federal Award Information—Required**
- C. Eligibility Information – Required**
- D. Application and Submission Information – Required**
- E. Application Review Information – Required**
- F. Federal Award Administration Information – Required**
- G. Federal Awarding Agency Contact(s) – Required**
- H. Other Information – Optional**

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
Center issuing announcement Mission Directorate

A. Program Description—Required

This section contains the full program description of the funding opportunity. It may be as long as needed to adequately communicate to potential applicants the areas in which funding may be provided.

It describes the Federal awarding agency's funding priorities or the technical or focus areas in which the Federal awarding agency intends to provide assistance. As appropriate, it may include any program history (e.g., whether this is a new program or a new or changed area of program emphasis).

This section may communicate indicators of successful projects (e.g., if the program encourages collaborative efforts) and may include examples of projects that have been funded previously.

This section also may include other information the Federal awarding agency deems necessary, and must at a minimum include citations for authorizing statutes and regulations for the funding opportunity.

If this is a broad announcement that is soliciting proposals for multiple projects (such as ROSES) then a description of each project should be included.

B. Federal Award Information—Required

Relevant information should include:

- The total amount of funding that the Federal awarding agency expects to award through the announcement;
- The anticipated number of Federal awards;
- The expected amounts of individual Federal awards (which may be a range);
- The amount of funding per Federal award, on average, experienced in previous years; and
- The anticipated start dates and periods of performance for new Federal awards.

This section also should address whether applications for renewal or supplementation of existing projects are eligible to compete with applications for new Federal awards.

This section also must indicate the type(s) of assistance instrument (e.g., grant, cooperative agreement) that may be awarded if applications are successful.

If cooperative agreements may be awarded, this section either should describe the “substantial involvement” that the Federal awarding agency expects to have or should reference where the potential applicant can find that information (e.g., in the funding opportunity description in A. Program Description—Required or Federal award administration information in section D. Application and Submission Information).

If procurement contracts also may be awarded, this must be stated.

C. Eligibility Information - Required

This section addresses the considerations or factors that determine applicant or application eligibility. This includes:

- The eligibility of particular types of applicant organizations,
- Any factors affecting the eligibility of the principal investigator or project director, and
- Any criteria that make particular projects ineligible.

Federal agencies should make clear whether an applicant's failure to meet an eligibility criterion by the time of an application deadline will result in the Federal awarding agency returning the application without review or, even though an application may be reviewed, will preclude the Federal awarding agency from making a Federal award.

Key elements to be addressed are:

1. Eligible Applicants—Required. Announcements must clearly identify the types of entities that are eligible to apply.

If there are no restrictions on eligibility, this section may simply indicate that all potential applicants are eligible.

If there are restrictions on eligibility, it is important to be clear about the specific types of entities that are eligible, not just the types that are ineligible. For example, if the program is limited to non-profit organizations subject to 26 U.S.C. 501(c) (3) of the tax code (26 U.S.C. 501(c) (3)), the announcement should say so. Similarly, it is better to state explicitly that Native American tribal organizations are eligible than to assume that they can unambiguously infer that from a statement that non-profit organizations may apply.

Eligibility also can be expressed by exception, (e.g., open to all types of domestic applicants other than individuals). This section should refer to any portion of Section IV specifying documentation that must be submitted to support an eligibility determination (e.g., proof of 501(c) (3) status as determined by the Internal Revenue Service or an authorizing tribal resolution).

To the extent that any funding restriction in Section IV.5 could affect the eligibility of an applicant or project, the announcement must either restate that restriction in this section or provide a cross-reference to its description in Section C.5.

2. Cost Sharing or Matching—Required.

Announcements must state whether there is required cost sharing, matching, or cost participation without which an application would be ineligible. If cost sharing is not required, the announcement must explicitly say so.

Required cost sharing may be a certain percentage or amount, or may be in the form of contributions of specified items or activities (e.g., provision of equipment). It is important that the announcement be clear about any restrictions on the types of cost (e.g., in-kind contributions) that are acceptable as cost sharing.

Cost sharing as an eligibility criterion includes requirements based in statute or regulation, as described in §200.306 Cost sharing or matching of this Part.

This section should refer to the appropriate portion(s) of section D. Application and Submission Information stating any pre-award requirements for submission of letters or other documentation to verify commitments to meet cost-sharing requirements if a Federal award is made.

3. Other—Required, if applicable.

If there are other eligibility criteria (i.e., criteria that have the effect of making an application or project ineligible for Federal awards, whether referred to as “responsiveness” criteria, “go-no go” criteria, “threshold” criteria, or in other ways), must be clearly stated and must include a reference to the regulation of requirement that describes the restriction, as applicable. For example, if entities that have been found to be in violation of a particular Federal statute are ineligible, it is important to say so.

This section must also state any limit on the number of applications an applicant may submit under the announcement and make clear whether the limitation is on the submitting organization, individual investigator/program director, or both.

This section should also address any eligibility criteria for beneficiaries or for program participants other than Federal award recipients.

NASA REQUIREMENT

Possible Ineligibility of Proposals that Include Participation of China or Chinese-owned Companies (required all)

Sample Language

Proposals involving bilateral participation, collaboration, or coordination in any way with China or any Chinese-owned company, whether funded or performed under a no-exchange-of-funds arrangement, may be ineligible for award.

D. Application and Submission Information - Required

1. Address to Request Application Package—Required.

NOTE – it is NASA policy to encourage open competition to include all eligible parties. Therefore, though it is NASA preference that all applications should be submitted electronically, Appendix B outlines the NASA process for submitting a non-electronic application.

Potential applicants must be told how to get application forms, kits, or other materials

needed to apply (if this announcement contains everything needed, this section need only say so).

- An Internet address where the materials can be accessed is acceptable.
- However, since high-speed Internet access is not yet universally available for downloading documents, and applicants may have additional accessibility requirements, there also should be a way for potential applicants to request paper copies of materials, such as a U.S. Postal Service mailing address, telephone or FAX number, Telephone Device for the Deaf (TDD), Text Telephone (TTY) number, and/or Federal Information Relay Service (FIRS) number.

2. Content and Form of Application Submission—Required.

This section must identify the required content of an application and the forms or formats that an applicant must use to submit it.

If any requirements are stated elsewhere because they are general requirements that apply to multiple programs or funding opportunities, this section should refer to where those requirements may be found.

This section also should include required forms or formats as part of the announcement or state where the applicant may obtain them.

This section should specifically address content and form or format requirements for:

- Pre-applications, letters of intent, or white papers required or encouraged (see Section IV.3), including any limitations on the number of pages or other formatting requirements similar to those for full applications.
- The application as a whole. For all submissions, this would include any limitations on:
 - The number of pages,
 - Font size and typeface, margins,
 - Paper size,
 - Number of copies, and
 - Sequence or assembly requirements.
- If electronic submission is permitted or required, this could include special requirements for formatting or signatures.
- Component pieces of the application (e.g., if all copies of the application must bear original signatures on the face page or the program narrative may not exceed 10 pages).
- This includes any pieces that may be submitted separately by third parties (e.g., references or letters confirming commitments from third parties that will be contributing a portion of any required cost sharing).
- Information that successful applicants must submit after notification of intent to make a Federal award, but prior to a Federal award. This could include evidence of compliance with requirements relating to human subjects or information needed to comply with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321-4370h).

NASA REQUIREMENT

DATA Management Plan (required for all Research FAs)

Note - NSPIRES now has a mandatory field that must be addressed. Any section that lays out the required elements for NSPIRES should include the “Data Management Plan”, with instructions to complete as required in the FA or why the data management plan does not apply to that proposal.

Sample language for FA requiring a data management plan.

All proposals submitted under this Funding Announcement are required to submit a Data Management Plan (DMP), in accordance with the NASA Plan for Increasing Access to the Results of Scientific Research (http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf). That plan must include:

- Specific data requirements and expectations;
- An example DMP or outline for the specific type of data likely to result from the funded projects; or
- A statement that a DMP is not required because of the nature of the activity (e.g., no data or proprietary or personally identifiable data are expected).

See SARA Q&A at <http://science.nasa.gov/researchers/sara/faqs/dmp-faq-roses/> for more information on this plan.]

3. Data Universal Numbering System System (DUNS) Number (<https://iupdate.dnb.com/iUpdate/viewiUpdateHome.htm>) and System for Award Management (SAM)—Required. (<https://www.sam.gov>)

This paragraph must state clearly that each applicant (unless the applicant is an individual or Federal awarding agency that is excluded from those requirements under 2 CFR §25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR §25.110(d)) is required to:

- Be registered in SAM before submitting its application;
- Provide a valid DUNS number in its application; and
- Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.

It also must state that the Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable DUNS and SAM requirements and, if an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

4. Submission Dates and Times—Required.

Announcements must identify due dates and times for all submissions. This includes not only the full applications but also any preliminary submissions (e.g., letters of intent, white papers, or pre-applications). It also includes any other submissions of information before Federal award that are separate from the full application.

If the funding opportunity is a general announcement that is open for a period of time with no specific due dates for applications, this section should say so.

NOTE: that the information on dates that is included in this section also must appear with other overview information in a location preceding the full text of the announcement (see §200.203 Notices of Funding Opportunities).

Each type of submission should be designated as encouraged or required and, if required, any deadline date (or dates, if the Federal awarding agency plans more than one cycle of application submission, review, and Federal award under the announcement) should be specified.

The announcement must state (or provide a reference to another document that states):

- Any deadline in terms of a date and local time. If the due date falls on a Saturday, Sunday, or Federal holiday, the reporting package is due the next business day.
- What the deadline means (e.g., whether it is the date and time by which the Federal awarding agency must receive the application, the date by which the application must be postmarked, or something else) and how that depends, if at all, on the submission method (e.g., mail, electronic, or personal/courier delivery).
- The effect of missing a deadline (e.g., whether late applications are neither reviewed nor considered or are reviewed and considered under some circumstances).
- How the receiving Federal office determines whether an application or pre-application has been submitted before the deadline. This includes the form of acceptable proof of mailing or system-generated documentation of receipt date and time.

This section also may indicate whether, when, and in what form the applicant will receive an acknowledgement of receipt.

This information should be displayed in ways that will be easy to understand and use. It can be difficult to extract all needed information from narrative paragraphs, even when they are well written. A tabular form for providing a summary of the information may help applicants for some programs and give them what effectively could be a checklist to verify the completeness of their application package before submission.

5. Intergovernmental Review—Required, if applicable.

If the funding opportunity is subject to Executive Order 12372, “Intergovernmental Review of Federal Programs,” the notice must say so. In alerting applicants that they must contact their state’s Single Point of Contact (SPOC) to find out about and comply with the state’s process under Executive Order 12372, it may be useful to inform potential applicants that the names and addresses of the SPOCs are listed in the Office of Management and Budget’s Website.

https://obamawhitehouse.archives.gov/omb/grants_spoc

6. Funding Restrictions—Required.

Notices must include information on funding restrictions in order to allow an applicant to develop an application and budget consistent with program requirements. Examples are:

- Whether construction is an allowable activity,
- If there are any limitations on direct costs such as foreign travel or equipment purchases, and
- If there are any limits on indirect costs (or facilities and administrative costs) – such as not paying a cost of money percentage.

NOTE: Applicants must be advised if Federal awards will not allow reimbursement of pre-Federal award costs.

NASA REQUIREMENT

Funding Restrictions (required all)

Sample language

- All proposed funds must be allowable, allocable and reasonable. Funds may only be used for the project. All activities charged under indirect cost must be allowed under 2 CFR 200 cost principles.
- Grants and Cooperative Agreements shall not provide for the payment of fee or profit to the recipient.
- Unless otherwise directed in 2 CFR 200, for changes to the negotiated indirect cost rate that occur throughout the project period, you must apply the rate negotiated for that year, whether higher or lower than at the time the budget and application was awarded.
- Proposals must not include bilateral participation, collaboration, or coordination with China or any Chinese-owned company or entity, whether funded or performed under a no-exchange-of-funds arrangement.
- Any funds used for match or cost sharing must be allowable under 2 CFR 200
- The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320. As defined in 2 CFR 200.67, the micro-purchase threshold for acquisitions of supplies or services made under grant and cooperative agreement awards issued to institutions of higher education, or related or affiliated nonprofit entities, or to nonprofit research organizations or independent research institutes is \$10,000; or such higher threshold as determined appropriate by the head of the relevant executive agency and consistent with audit findings under chapter 75 of Title 31, United States Code, internal institutional risk assessment, or State law.

NOTE: For funding opportunities that will result in Fellowships or Scholarships the following statement shall be added to this section of the announcement:

- Awards made under NASA Fellowship and Scholarship funding opportunities shall not provide for the payment of Facilities and Administration (F&A), overhead or indirect costs.

7. Other Submission Requirements— Required.

This section must address any other submission requirements not included in the other paragraphs of this section. This might include the format of submission, i.e., paper or electronic, for each type of required submission.

Applicants should not be required to submit in more than one format and this section should indicate whether they may choose whether to submit applications in hard copy or electronically, may submit only in hard copy, or may submit only electronically.

This section also must indicate where applications (and any pre-applications) must be submitted if sent by postal mail, electronic means, or hand-delivery. For postal mail submission, this must include the name of an office, official, individual or function (e.g., application receipt center) and a complete mailing address. For electronic submission, this must include the URL or email address; whether a password(s) is required; whether particular software or other electronic capabilities are required; what to do in the event of system problems and a point of contact who will be available in the event the applicant experiences technical difficulties.

NOTE: With respect to electronic methods for providing information about funding opportunities or accepting applicants' submissions of information, each Federal awarding agency is responsible for compliance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d).

NASA REQUIREMENT

Collection of STEM information (required all)

Sample Language

NASA is implementing a process to collect demographic data from grant applicants for the purpose of analyzing demographic differences associated with its award processes. Information collected will include name, gender, race, ethnicity, disability status, and citizenship status. Submission of the information is voluntary and is not a precondition of award.

E. Application Review Information

1. Criteria - Required

This section must address the criteria that the Federal awarding agency will use to evaluate applications. This includes the merit and other review criteria that evaluators will use to judge applications, including any statutory, regulatory, or other preferences (e.g., minority status or Native American tribal preferences) that will be applied in the review process. These criteria are

distinct from eligibility criteria that are addressed before an application is accepted for review and any program policy or other factors that are applied during the selection process, after the review process is completed.

The intent is to make the application process transparent so applicants can make informed decisions when preparing their applications to maximize fairness of the process.

The announcement should clearly describe all criteria, including any sub-criteria. If criteria vary in importance, the announcement should specify the relative percentages, weights, or other means used to distinguish among them.

For statutory, regulatory, or other preferences, the announcement should provide a detailed explanation of those preferences with an explicit indication of their effect (e.g., whether they result in additional points being assigned).

If an applicant's proposed cost sharing will be considered in the review process (as opposed to being an eligibility criterion described in Section III.2), the announcement must specifically address how it will be considered (e.g., to assign a certain number of additional points to applicants who offer cost sharing, or to break ties among applications with equivalent scores after evaluation against all other factors).

If cost sharing will not be considered in the evaluation, the announcement should say so, so that there is no ambiguity for potential applicants. Vague statements that cost sharing is encouraged, without clarification as to what that means, are unhelpful to applicants. It also is important that the announcement be clear about any restrictions on the types of cost (e.g., in-kind contributions) that are acceptable as cost sharing.

2. Review and Selection Process—Required.

This section may vary in the level of detail provided. The announcement must list any program policy or other factors or elements, other than merit criteria, that the selecting official may use in selecting applications for Federal award (e.g., geographical dispersion, program balance, or diversity).

The Federal awarding agency may also include other appropriate details. For example, this section may:

- Indicate who is responsible for evaluation against the merit criteria (e.g., peers external to the Federal awarding agency or Federal awarding agency personnel) and/or who makes the final selections for Federal awards.
- If there is a multi-phase review process (e.g., an external panel advising internal Federal awarding agency personnel who make final recommendations to the deciding official), the announcement may describe the phases.
- The number of people on an evaluation panel and how it operates, the way reviewers are selected, reviewer qualifications, and the way that conflicts of interest are avoided.

In addition, if the Federal awarding agency permits applicants to nominate suggested reviewers of their applications or suggest those they feel may be inappropriate due to a conflict of interest,

that information should be included in this section.

NASA REQUIREMENT

Risk Analysis- Required All

Sample Language

NASA Grant Officer will conduct a pre-award review of risk associated with the proposer as required by 2 CFR 200.205. For all proposals selected for award, the Grant Officer will review the submitting organization's information available through the Federal Awardee Performance and Integrity Information System (FAPIIS) and the System for Award Management (SAM) to include checks on entity core data, registration expiration date, active exclusions, and delinquent federal debt.

3. Risk Review – Required All

For any Federal award under a notice of funding opportunity, if the Federal awarding agency anticipates that the total Federal share will be greater than the simplified acquisition threshold on any Federal award under a notice of funding opportunity may include, over the period of performance (see §200.88 Simplified Acquisition Threshold), this section must also inform applicants:

- i. That the Federal awarding agency, prior to making a Federal award with a total amount of Federal share greater than the simplified acquisition threshold, is required to review and consider any information about the applicant that is in the designated integrity and performance system accessible through SAM (currently FAPIIS) (see 41 U.S.C. 2313);
- ii. That an applicant, at its option, may review information in the designated integrity and performance systems accessible through SAM and comment on any information about itself that a Federal awarding agency previously entered and is currently in the designated integrity and performance system accessible through SAM;
- iii. That the Federal awarding agency will consider any comments by the applicant, in addition to the other information in the designated integrity and performance system, in making a judgment about the applicant's integrity, business ethics, and record of performance under Federal awards when completing the review of risk posed by applicants as described in §200.205 Federal awarding agency review of risk posed by applicants.

4. Anticipated Announcement and Federal Award Dates—Optional.

This section is intended to provide applicants with information they can use for planning purposes. If there is a single application deadline followed by the simultaneous review of all applications, the Federal awarding agency can include in this section information about the anticipated dates for announcing or notifying successful and unsuccessful applicants and for

having Federal awards in place. If applications are received and evaluated on a “rolling” basis at different times during an extended period, it may be appropriate to give applicants an estimate of the time needed to process an application and notify the applicant of the Federal awarding agency's decision.

F. Federal Award Administration Information

1. Federal Award Notices—Required All

This section must address what a successful applicant can expect to receive following selection.

If the Federal awarding agency's practice is to provide a separate notice stating that an application has been selected before it actually makes the Federal award, this section would be the place to indicate that the letter is not an authorization to begin performance (to the extent that it allows charging to Federal awards of pre-award costs at the non-Federal entity's own risk).

This section should indicate that the notice of Federal award signed by the grants officer (or equivalent) is the authorizing document, and whether it is provided through postal mail or by electronic means and to whom.

It also may address the timing, form, and content of notifications to unsuccessful applicants. See also §200.210 Information contained in a Federal award.

2. Administrative and National Policy Requirements—Required All

This section must identify the usual administrative and national policy requirements the Federal awarding agency's Federal awards may include. Providing this information lets a potential applicant identify any requirements with which it would have difficulty complying if its application is successful. In those cases, early notification about the requirements allows the potential applicant to decide not to apply or to take needed actions before receiving the Federal award.

The announcement need not include all of the terms and conditions of the Federal award, but may refer to a document (with information about how to obtain it) or Internet site where applicants can see the terms and conditions.

If this funding opportunity will lead to Federal awards with some special terms and conditions that differ from the Federal awarding agency's usual (sometimes called “general”) terms and conditions, this section should highlight those special terms and conditions. Doing so will alert applicants that have received Federal awards from the Federal awarding agency previously and might not otherwise expect different terms and conditions.

For the same reason, the announcement should inform potential applicants about special requirements that could apply to particular Federal awards after the review of applications and other information, based on the particular circumstances of the effort to be supported

(e.g., if human subjects were to be involved or if some situations may justify special terms on intellectual property, data sharing or security requirements).

NASA REQUIREMENT

Research Terms and Conditions (required for all funding announcements that are for research)

Sample language

Awards from this funding announcement that are issued under 2 CFR 1800 are subject to the Federal Research Terms and Conditions (RTC) located at <http://www.nsf.gov/awards/managing/rtc.jsp>. In addition to the RTC and NASA-specific guidance, three companion resources can also be found on the website: Appendix A— Prior Approval Matrix, Appendix B—Subaward Requirements Matrix, and Appendix C—National Policy Requirements Matrix.

NASA REQUIREMENT

Environmental Statement-Required All

Sample language

Awards of proposals related to this solicitation must comply with the National Environmental Policy Act (NEPA); thus, proposers are encouraged to plan and budget for any anticipated environmental impacts. While most research awards will not trigger action-specific NEPA review, some activities (including international actions) will.

The majority of grant related activities are categorically excluded as research and development (R&D) projects that do not pose any adverse environmental impact. A blanket NASA Grants Record of Environmental Consideration (REC) provides NEPA coverage for these anticipated activities. Section VIII includes a questionnaire to determine whether a specific proposal falls within the Grants REC and must be completed as part of the solicitation process. Activities outside of the bounding conditions of the Grants REC will require additional NEPA analysis. Examples of actions that will likely require NEPA analysis include but are not limited to: suborbital-class flights not conducted by a NASA Program Office (see Section V); activities involving ground-breaking construction/fieldwork; and certain payload activities such as the use of dropsondes.

Questions concerning environmental compliance may be addressed to Tina Norwood, NASA NEPA Manager, at tina.norwood-1@nasa.gov or (202) 358-7324.

3. Reporting—Required.

This section must include general information about the type (*e.g.*, financial or performance), frequency, and means of submission (paper or electronic) of post-Federal award reporting requirements. Highlight any special reporting requirements for Federal awards under this

funding opportunity that differ (*e.g.*, by report type, frequency, form/format, or circumstances for use) from what the Federal awarding agency's Federal awards usually require. Federal awarding agencies must also describe in this section all relevant requirements such as those at 2 CFR 180.335 and 2 CFR 180.350.

If the Federal share of any Federal award may include more than \$500,000 over the period of performance, this section must inform potential applicants about the post award reporting requirements reflected in Appendix XII—Award Term and Condition for Recipient Integrity and Performance Matters.

NASA REQUIREMENT

Access to research (required for all FAs that are for research)

Sample language

Awards issued under the Funding Announcement must comply with the provision set forth in the NASA Plan for Increasing Access to the Results of Scientific Research (http://www.nasa.gov/sites/default/files/files/NASA_Data_Plan.pdf) including the responsibility for—

- Submitting as approved peer-reviewed manuscripts and metadata to a designated repository: and
- Reporting publications with the annual and final progress reports.

G. Federal Awarding Agency NASA Contact(s)—Required All

The announcement must give potential applicants a point(s) of contact for answering questions or helping with problems while the funding opportunity is open. The intent of this requirement is to be as helpful as possible to potential applicants, so the Federal awarding agency should consider approaches such as giving:

- Points of contact who may be reached in multiple ways (*e.g.*, by telephone, fax, and/or email, as well as regular mail).
- A fax or email address that multiple people access, so that someone will respond even if others are unexpectedly absent during critical periods.
- Different contacts for distinct kinds of help (*e.g.*, one for questions of programmatic content and a second for administrative questions).

H. Other Information—Optional

This section may include any additional information that will assist a potential applicant. For example, the section might:

- Indicate whether this is a new program or a one-time initiative.
- Mention related programs or other upcoming or ongoing Federal awarding agency funding opportunities for similar activities.
- Include current Internet addresses for Federal awarding agency Web sites that may be useful

- to an applicant in understanding the program.
- Alert applicants to the need to identify proprietary information and inform them about the way the Federal awarding agency will handle it.
- Include certain routine notices to applicants (e.g., that the Federal government is not obligated to make any Federal award as a result of the announcement or that only grants officers can bind the Federal government to the expenditure of funds).

NASA REQUIREMENT

Access to NASA facilities/systems-Required All)

Sample Language

All recipients must work with NASA project/program staff to ensure proper credentialing for any individuals who need access to NASA facilities and/or systems. Such individuals include U.S. citizens, lawful permanent residents (“green card” holders), and foreign nationals (those who are neither U.S. citizens nor permanent residents).

Limited Release of Proposers Confidential Business Information (required all)

Sample Language

- (a) For proposal evaluation and other administrative processing NASA may find it necessary to release information submitted by the proposer to individuals not employed by NASA. Business information that would ordinarily be entitled to confidential treatment may be included in the information released to these individuals. Accordingly, by submission of this proposal the proposer hereby consents to a limited release of its confidential business information (CBI).
- (b) Except where otherwise provided by law, NASA will permit the limited release of CBI only pursuant to non-disclosure agreements signed by the assisting contractor or subcontractor, and their individual employees who may require access to the CBI to perform the assisting contract.

Cross-Waiver of Liability for International Space Station, Science or Space Exploration Activities (required as appropriate) - The language in the cross waiver is required by the international agreements NASA has with its international partners for the use of the Space Station and/or for exploration of space.

Sample Language

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. See Appendix D for specific conditions that will apply to an approved award.

Appendix B – Waiver Request Process

Applicants may request a waiver of the requirement for electronic submission if they can provide a compelling reason. The process for applying for a waiver is described below. Questions on applying for a waiver may be directed to NASA contact listed in the funding announcement.

All applicants must register in the System for Award Management (SAM) and NASA Solicitation and Proposal Integrated Review and Evaluation System (NSPIRES) even those who intend to request a waiver. If you do not have an active SAM registration prior to submitting your paper application, it will be screened out and returned to you without review. Registration is necessary to ensure that information required for paper submission is available and that the applicant is ready to submit electronically if the waiver is denied.

A written waiver request must be received by NASA at least 20 calendar days in advance of the application due date stated on the cover page of the Request for Proposal (RFP). The request must be either e-mailed or mailed (USPS or common carrier) to the NASA contact listed in the funding announcement:

When requesting a waiver, the following information must be included:

- NASA CAN, or announcement title and announcement number;
- Name, address, and telephone number of the applicant organization as they will appear in the application;
- Applicant organization's DUNS number;
- Authorized Organization Representative (AOR) for the named applicant;
- Name, telephone number, and e-mail of the applicant organization's Contact Person for the waiver; and
- Details of why the organization is unable to submit electronically, explaining why their physical location does not have adequate access to the Internet.

The NASA official will either e-mail (if the waiver request was received by e-mail) or express mail/deliver (if the waiver request was received by mail) the waiver decision to the Contact Person no later than seven calendar days prior to the application due date. If the waiver is approved, an application must be submitted either by email or mailed in as a paper copy or using a CD-ROM or similar device. If the waiver is disapproved, the applicant organization must be prepared to submit through Grants.gov or NSPIRES or forfeit the opportunity to apply. The written approval must be included as the cover page of the paper application and the application must be received by the due date.

A paper application will not be accepted without the waiver approval and will be returned to the applicant if it is not included. Paper applications received after the due date will not be accepted.

Instructions for Submitting a Paper Application with a Waiver Paper submissions must be postmarked by date and time specified in the announcement. Applications may be emailed to the NASA contact, shipped using only Federal Express (FedEx), United Parcel Service (UPS), or the U.S. Postal Service (USPS). You will be notified that your application has been received.

Note: If you use the USPS, you must use Express Mail. Please remember that mail sent to federal facilities undergoes a security screening prior to delivery. You are responsible for ensuring that you submit your application so that it will arrive by the application due date and time.

NASA will not accept or consider any applications that are sent by facsimile or hand carried.

If you are submitting a paper application, you must submit an original application. The original and copies must not be bound and nothing should be attached, stapled, folded, or pasted. Do not use staples, paper clips, or fasteners. You may use rubber bands.

If you are submitting a paper application, you must follow the funding announcement's instructions for order in which the required forms and documents are to be submitted.

You must follow the formatting instructions included in the funding announcement. Oversized pages (e.g., foldouts, posters) will be proportionally calculated against the page count.

With the exception of standard forms in the application package, all pages in the application should be numbered consecutively, with a notation "page XX out of XX". This notation assures that all the pages were received.

Appendix C – Certifications, Assurances, and Representations

On February 2, 2019, the System for Award Management (SAM) implemented a new process that allows financial assistance registrants to submit common federal government-wide certifications and representations. Individuals and businesses (entities) registering on SAM.gov can review and submit financial assistance certifications and representations online. The new process will be required effective January 1, 2020. Guidance on the new process and system change can be found at <https://interact.gsa.gov/blog/certifications-and-representation-improvements-sam>

Separate and apart from the government wide Certifications and Representations listed in SAM, NASA will allow recipients to submit certain certifications, assurances and representations required by statute, executive order, or regulation on an annual basis, if the recipients have ongoing and continuing relationships with the agency. Annual certifications and representations shall be signed by responsible officials with the authority to ensure recipients' compliance with the pertinent requirements. Recipients determine how annual representations affect their responsibility to obtain required certifications from pass-through entities. All Certifications, Assurances, and Representations that must be completed as part of the proposal submission are listed below, and are also accessible in NSPIRES.

C1. Certification of Compliance on Proposal Cover Page

By submitting the proposal identified in the Cover Sheet/Proposal Summary in response to this Research Announcement, the Authorizing Official of the proposing organization (or the individual Proposer if there is no proposing organization) as identified below:

- a) Certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- b) Agrees to accept the obligation to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- c) Confirms compliance with all applicable terms and conditions, rules, and stipulations set forth in the Certifications, Assurances, and Representations contained in this NRA or CAN. Willful inclusion of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

C2. Assurance and Representation on China restrictions set out in PL 112-10 Title III section 1340 and all subsequent appropriation acts.

By submission of its proposal, the proposer represents that the proposer is not China or a Chinese-owned company, and that the proposer will not participate, collaborate, or coordinate bilaterally with China or any Chinese-owned company, at the prime recipient level or at any subrecipient level, whether the bilateral involvement is funded or performed under a no- exchange of funds arrangement.

C3. Representation Regarding Whistleblower Protection as provided in PL 113-235 Title VII section 743 and all subsequent appropriation acts:

A corporation or prospective recipient represents that employees or contractors of such entity seeking to report fraud, waste, or abuse are NOT required to sign internal confidentiality agreements or

statements prohibiting or otherwise restricting such employees or contactors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

Appendix D – Award Terms and Conditions

Terms and conditions (T&C) are used to standardize grant and cooperative agreement language across NASA Centers. T&C can be incorporated into the grant in full text or by reference and are further defined below:

Terms and Conditions

(a) Unless otherwise noted in the prescriptive language awards with Non-Federal entities, Grants Officer shall incorporate by reference the terms and conditions set forth in sections D1 through D18 of this Appendix. Any of the terms and conditions in sections D19 through D27 shall be referenced in full text. The program office may need to include information required for certain terms and conditions to allow for additional information, or permit minor modifications. For example, the Grant Officer may substitute appropriate sections of section D2, Technical Publications and Reports,” with reporting requirements specified by the program office.

(b) Additional special terms and conditions may be included to the extent they are required and are not inconsistent with the other terms and conditions in this Appendix. A deviation in accordance with section 5.10.2 is required before a new term and condition inconsistent with the standard terms and conditions can be included in an award.

(c) Whenever the word “award” appears in this Appendix, it shall be deemed to include, both grants and cooperative agreements, as appropriate.

(d) Terms and conditions for research awards awarded to foreign organizations, when approved by Headquarters, will be provided in full text. Referenced handbooks, statutes, or other regulations, which the recipient may not have access to, must be made available when requested by the foreign organization.

(e) Awards issued by NASA to commercial organizations where cost sharing is not required shall incorporate the terms and conditions set forth in this appendix.

(f) Terms and conditions do not supersede state laws.

D1. Compliance with OMB Guidance on Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards (Oct. 13, 2015)

This award is subject to the requirements set forth in 2 CFR part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards as adopted by NASA in Part 1800 of Title 2 of the Code of Federal Regulations. Specific terms and conditions set forth in this award document are provided to supplement and clarify, not replace, the OMB Uniform Guidance, except in circumstances where a waiver from OMB Uniform Guidance requirements has been obtained by NASA.

(a) With the exception of Subpart E and F, this award is subject to the requirements set forth in OMB Guidance on Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards at 2 CFR Chapter 1, and Chapter II Part 200 as adopted by

NASA in Part 1800 of Title 2 of the Code of Federal Regulations. Specific terms and conditions set forth in this award document are provided to supplement and clarify, not replace, the Guidance, except in circumstances where a waiver from the OMB Uniform Guidance requirements has been obtained by NASA.

(b) In lieu of Subparts E and F of 2 CFR part 200, the expenditure of Government funds by the recipient and the allowability of costs recognized as a resource contribution by the recipient shall be governed by the FAR cost principles implemented by FAR Parts 30, 31, and 48 CFR part 99. (If the recipient is a consortium which includes non-commercial firm members, cost allowability for those members will be determined by the OMB Uniform Guidance at Subpart E and F of 2 CFR 200.)

D2. Technical Publications and Reports

(a) NASA encourages the widest practicable dissemination of research results at any time during the course of the investigation.

(1) All information disseminated as a result of the award shall contain a statement which acknowledges NASA's support and identifies the award by number (*e.g.*, “the material is based upon work supported by NASA under award No(s) XXXXX (as shown on the award notice).)

(2) Except for articles or papers published in scientific, technical, or professional journals, the exposition of results from NASA supported research should also include the following disclaimer - “Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.”

(3) As a courtesy, any release of a NASA photograph or illustration should list NASA first on the credit line followed by the name of the Principal Investigator's Institution. As an example - “Photograph or illustration, figure, etc. courtesy of NASA or NASA Center managing the mission or program and the Principal Investigator's institution.”

(4) For research and research-related awards, see additional reporting requirements in section D30.

(b) Reports shall be in the English language, informal in nature, and ordinarily not exceed three pages (not counting bibliographies, abstracts, and lists of other media). The recipient shall submit the following reports -

(1) A Progress Report for all but the final year of the award. Each report is due 60 days before the anniversary date of the award and shall briefly describe what was accomplished during the reporting period. A term or condition specifying more frequent reporting may be required.

(2) A Summary of Research or Educational Activity Report is due within 90 days after the end date for the period of performance, regardless of whether or not support is continued under another award. This report shall be a comprehensive summary of significant accomplishments during the duration of the award.

(c) Progress Reports, Summaries of Research, and Educational Activity Reports shall include the following on the first page:

- (1) Title of award.
 - (2) Type of report.
 - (3) Name of the principal investigator.
 - (4) Period covered by the report.
 - (5) Name and address of the recipient's institution.
 - (6) Award number.
- (d) Progress Reports, Summaries of Research, and Educational Activity Reports shall be distributed as follows:
- (1) The original report, in both hard copy and electronic format, to the Technical Officer.
 - (2) One copy to the NASA Technical Officer and New Technology Officer with a notice to the Grant Officer, that a report was sent.

D3. Extensions

- (a) It is NASA's policy to provide maximum possible continuity in funding award-supported research and educational activities, therefore, awards may be extended for additional periods of time when necessary to complete work that was part of the original award. NASA generally only approves such extensions within funds already made available. Any extension that would require additional funding must be supported by a proposal submitted at least three months in advance of the end date of the period of performance.
- (b) Recipients may extend the expiration date of an award if additional time beyond the established end date is required to assure adequate completion of the original scope of work within the funds already made available. For this purpose, the recipient may make a one-time no-cost extension, not to exceed 12 months, prior to the established expiration date. Written notification of such an extension, with the supporting reasons, must be received by the NASA Grant Officer at least ten days prior to the expiration of the award. A copy of the extension must also be forwarded to cognizant Office of Naval Research (ONR) office, if administration has been delegated to ONR. NASA reserves the right to disapprove the extension if the requirements set forth at [§ 200.308\(d\) \(2\)](#) are not met.
- (c) Requests for approval for all other no-cost extensions must be submitted in writing to the NASA Grant Officer. A copy of this request must also be forwarded to cognizant Office of Naval Research (ONR) office, if administration has been delegated to ONR.

D4. Termination and Enforcement

Termination and enforcement conditions of awards are specified in [§ 200.338](#) through [§ 200.342](#)

D5. Change in Principal Investigator or scope

- (a) The recipient shall obtain the approval of the NASA Grant Officer for a change of the Principal Investigator, or for a significant absence of the Principal Investigator from the project, defined as a three-month absence from the program or a 25 percent reduction in time devoted to the project. Significantly, reduced availability of the services of the Principal Investigator(s) named in the award instrument could be grounds for termination, unless alternative arrangements are made and

approved in writing by the Grant Officer.

(b) Prior written approval is required from NASA if there is to be a significant change in the objective or scope of the project

D6. Financial Management

(a) Advance payments will be made by the Financial Management Office of the NASA Center assigned financial cognizance of the award, using the Department of Health and Human Services' Payment Management System (DHHS/PMS), in accordance with procedures provided to the recipient. The recipient shall submit a Federal Financial Report (SF 425), and, when applicable, a Federal Financial Report Attachment (SF 425A) electronically to DHHS/PMS within 30 days following the end of each Federal fiscal quarter (i.e., December 31, March 31, June 30, and September 30).

(b) In addition, the recipient shall submit a final SF 425 in electronic or paper form to NASA within 90 calendar days after the end date of the period of performance. The final SF 425 shall pertain only to the completed award and shall include total disbursements from inception through completion. The report shall be marked "Final." The final SF 425 shall be submitted to NASA per the Grants and Cooperative Agreement Manual (GCAM) Appendix E, Required Publications and Reports; A copy of the GCAM is located at https://prod.nais.nasa.gov/pub/pub_library/srba.

(c) By signing any report delivered under the award, the authorizing official for the recipient certifies to the best of his or her knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and intent set forth in the award documents. The authorizing official by signing the report also certified he or she is aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject him or her to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code, Title 18, Section 1001 and Title 31 Section 3729-3733 and 3801-3812.)

(d) Unless otherwise directed by the Grant Officer, any unexpended balance of funds which remains at the end of any funding period, except the final funding period of the award, may be carried over to the next funding period, and may be used to defray costs of any funding period of the award. This includes allowing the carryover of funds to the second and subsequent years of a multiple year award. Unexpended funds from one award may not be carried over to a new or different award. This term and condition also applies to subawardees/subcontractors performing substantive work under the award. NASA reserves the right to remove unexpended balances from awards when insufficient efforts have been made by the awardee to liquidate funding balances in a timely fashion.

D7. Equipment and other Property

(a) NASA permits acquisition of special purpose and general purpose equipment specifically required for use exclusively for research activities.

(1) Acquisition of special purpose or general purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) and not included in the approved proposal budget, requires the prior approval of the NASA Grant Officer. Requests

to the Grant Officer for the acquisition of equipment shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment, and including a written certification that the equipment will be used exclusively for research, activities. (A change in the model number of a prior approved piece of equipment does not require resubmission for that item.) Research awards are exempt from the prior approval requirement.

(2) Special purpose and general purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) acquired by the recipient under an award for the purpose of research shall be titled to the recipient as “exempt” without further obligation to NASA, including reporting of the equipment, in accordance with § 200.312(c) and § 1800.312. Special purpose or general purpose equipment costing in excess of \$5,000 (unless a lower threshold has been established by the recipient) acquired by the recipient under an award for non-research work shall be titled to the recipient in accordance with § 200.313.

(3) Special purpose or general purpose equipment acquired by the recipient with award funds, valued under \$5,000 (unless a lower threshold is established by the recipient) are classified as “supplies,” do not require the prior approval of the NASA Grant Officer, shall vest in the recipient and will be titled to the recipient in accordance with § 200.314.

(4) Award funds may be expended for the acquisition of land or interests therein or for the acquisition and construction of facilities only under a facilities award.

(b) As required the recipient shall submit an annual Inventory Report, to be received no later than October 15 of each year, which lists all reportable non-exempt equipment and/or Federally owned property in its custody as of September 30. Negative responses for annual Inventory Reports (when there is no reportable equipment) are not required. A Final Inventory Report of Federally Owned Property, including equipment where title was taken by the Government, will be submitted by the recipient no later than 60 days after the end date of the period of performance. Negative responses for Final Inventory Reports are required.

(1) All reports will include the information listed in paragraph (d)(1) of § 200.313, Equipment. No specific report form or format is required, provided that all necessary information is provided.

(2) The original of each report shall be submitted to the Deputy Chief Financial Officer (Finance). Copies shall be furnished to the Center Industrial Property Officer and to ONR.

D8. Patent Rights

As stated at § 200.315(c), this award is subject to the provisions of 37 CFR 401.3(a) which requires use of the standard clause set out at 37 CFR 401.14 “Patent Rights (Small Business Firms and Nonprofit Organizations)” and the following:

(a) Definitions

The words “contract” or “Contractor” are used in 37 CFR 401.14. Those words shall be replaced by the words “award” or “recipient,” respectively.

The term “Federal Agency,” “agency,” or “funding Federal agency” is used 37 CFR 401.14, the term

shall be replaced by the term “NASA.”

The term “award,” as used in this term and condition, means any actual or proposed grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, subaward, or subcontract executed or entered into thereunder.

(b) The below items are added to the end of paragraph (c) of 37 CFR 401.14 are as follows:

“(5) The recipient may use whatever format is convenient to disclose subject invention required in subparagraph (c)(1). NASA prefers that the recipient use either the electronic or paper version of NASA Form 1679, Disclosure of Invention and New Technology (Including Software), to disclose subject inventions. Both the electronic and paper version of the NASA Form 1679 may be accessed at the electronic New Technology Reporting Web site <https://invention.nasa.gov>.

“(6) In addition to the above, the recipient shall provide the New Technology Representative, as designated under term and condition “Designation of New Technology Representative and Patent Representative” at Appendix D24 of the GCAM, the following:

(i) A yearly interim new technology summary report listing any subject inventions required to be disclosed during the preceding year (or a statement certifying there were none).

(ii) A final new technology summary report listing all subject inventions (or a statement certifying there were none) for the entire award period; which report shall be submitted within 90 days after the end date for the period of performance within the designated system noted within the award document.”

(c) The below item is added to the end of paragraph (f)(1) of 37 CFR 401.14 “Patent Rights”:

“(iii) The recipient shall through employee agreements or other suitable recipient policy, require that its employees “will assign and do hereby assign” to the recipient all right, title and interest in any subject invention under this award.”

(d) The term “subcontract” in paragraph (g) of 37 CFR 401.14 shall include purchase orders.

(e) The following constitutes paragraph “(l)” of in 37 CFR 404.14

“(l) Communications A copy of all submissions or requests required 37 CFR 401.14, plus a copy of any reports, manuscripts, publications or similar material bearing on patent matters, shall be sent to the Center Patent Counsel and the NASA Grant Officer in addition to any other submission requirements in the award terms and conditions (*e.g.*, as specified in this term and condition and in term and condition under Appendix D24 of the GCAM “Designation of New Technology Representative and Patent Representative”). If any reports contain information describing a “subject invention” for which the recipient has elected or may elect to retain title, NASA will use reasonable efforts to delay public release by NASA or publication by NASA in a NASA technical series until an application filing date has been established, provided that the recipient identify the information and the “subject invention” to which it relates at the time of submittal. If required by the Patent Representative or requested by the New Technology Representative, as designated under Appendix D24 of the GCAM “Designation of New Technology Representative and Patent Representative,” the recipient shall provide the filing date, serial number and title, a copy of the patent application, and a patent number and issue date for any “subject invention” in any country in which the recipient has

applied for patents. Additionally, the NASA shall have an irrevocable power to inspect and make copies of the patent application file, when a Federal Government employee is a co-inventor.”

(f) NASA Inventions. NASA will use reasonable efforts to report inventions made by NASA employees as a consequence of, or which bear a direct relation to, the performance of specified NASA activities under this agreement and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government.

(g) The recipient agrees, subject to (g)(1) below, that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this term and condition.

- (1) Publishing information concerning an invention before a patent application is filed on a subject invention may create a bar to a valid patent. To avoid this bar, agencies may withhold information from the public that discloses any invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license) (see 35 U.S.C. 205 and 3737 CFR part 401). Agencies may only withhold information concerning inventions for a reasonable time in order for a patent application to be filed. Once filed in any patent office, agencies are not required to release copies of any document that is a part of a patent application for those subject inventions.
- (2) In the event NASA contractors are tasked to perform work in support of specified activities under a cooperative agreement and inventions are made by contractor employees, the contractor will normally retain title to its employee inventions in accordance with 35 U.S.C. 202, 1414 CFR part 1245, and/or Executive Order 12591. In the event the contractor decides not to pursue rights to title in any such invention and NASA obtains or retains title to such inventions, NASA will use reasonable efforts to report such inventions and, upon timely request, will use reasonable efforts to grant the recipient an exclusive, or partially exclusive, revocable, royalty-bearing license, subject to the retention of a royalty-free right of the Government to practice or have practiced the invention by or on behalf of the Government..

D9. Rights in Data

(a) “Data,” as used in this term and condition, means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, and any copyrightable work, including computer software and documentation thereof.

(b) As to data first produced by recipient in carrying out recipient's responsibilities under this award in which the recipient asserts copyright, or data for which copyright ownership was acquired under the grant, the recipient grants to the Federal Government (Government), a royalty-free, nonexclusive and irrevocable license to use, reproduce, distribute (including distribution by transmission) to the public, perform publicly, prepare derivative works, and display publicly, data in whole or in part in any manner for Federal purposes and to have or permit others to do so for Federal purposes only.

(c) In order that the Government may exercise its license rights in data, the Government, upon

request to the recipient, shall have the right to review and/or obtain delivery of data resulting from the performance of work under this award or acquired under this award, and authorize others to receive such data to use for Federal purposes.

(d) Cost Sharing and/or Matching Efforts. When the recipient cost shares with the Government on the effort, the following paragraph also applies -

“(1) In the event data first produced by the recipient in carrying out recipient's responsibilities under this award is furnished to NASA, and recipient considers such data to embody trade secrets or to comprise commercial or financial information which is privileged or confidential, and such data is so identified with a suitable notice or legend, the data will be maintained in confidence and disclosed and used by the Government and its contractors (under suitable protective conditions) only for experimental, evaluation, research and development purposes, by or on behalf of the Government for an agreed to period of time, and thereafter for Federal purposes as defined in Appendix D9 (b).”

(e) For Cooperative Agreements, the following paragraph also applies -

“(1) As to data first produced by NASA in carrying out NASA's responsibilities under a cooperative agreement and which data would embody trade secrets or would comprise commercial or financial information that is privileged or confidential if it has been obtained from the recipient, such data will be marked with an appropriate legend and maintained in confidence for 5 years (unless a shorter period has been agreed to between the Government and recipient) after development of the information, with the express understanding that during the aforesaid period such data may be disclosed and used (under suitable protective conditions) by or on behalf of the Government for Government purposes only, and thereafter for any purpose whatsoever without restriction on disclosure and use. Recipient agrees not to disclose such data to any third party without NASA's written approval until the aforementioned restricted period expires.”

D10. National Security

NASA awards normally do not involve classified information. However, if it is known in advance that an award involves classified information or if the work on the award is likely to develop classified information, individuals performing on the award who will have access to the information must obtain the appropriate security clearance in advance of performing on the award, in accordance with NASA Procedural Requirements (NPR) 1600.2, NASA Classified National Security Information (CNSI) w/Change 2. When access to classified information is not originally anticipated in the performance of an award, but such information is subsequently sought or potentially developed by the award recipient, the NASA Grant Officer who issued the award shall be notified immediately, and prior to work under the award proceeding, to implement the appropriate clearance requirements.

D11. Non-Discrimination

(a) To the extent provided by law and any applicable agency regulations, this award and any program assisted thereby are subject to the provisions of Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352), Title IX of the Education amendments of 1972 (Pub. L. 92-318, 20 U.S.C. 1681 et seq.), section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), the Age Discrimination Act of 1975 (Pub. L. 94-135), the implementing regulations issued pursuant thereto by NASA, and the assurance of compliance which the recipient has filed with NASA.

(b) Except for commercially available supplies, materials, equipment, or general support services, the recipient shall obtain an assurance of compliance as required by NASA regulations from each

organization that applies or serves as a subrecipient, subawardee, contractor or subcontractor under this award.

(c) Work on NASA awards is subject to the provisions of Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352; 42 U.S.C. 2000d-1), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680et seq.), section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101et seq.), and the NASA implementing regulations (14 CFR parts 1250, 1251, 1252, and 1253).

D12. Clean Air and Water

(a) Comply with applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended (42 U.S.C. 7401et seq.) and of the Federal Water Pollution Control Act (33 U.S.C. 1251et seq.).

(b) Ensure that no portion of the work under this award will be performed in a facility listed on the Environmental Protection Agency (EPA) List of Violating Facilities on the date that this award was effective unless and until the EPA eliminates the name of such facility or facilities from such listings.

(c) Use its best efforts to comply with clean air standards and clean water standards at the facility in which the award is being performed.

(d) Insert the substance of these terms and conditions into any nonexempt subaward or contract under the award.

(e) Report violations to NASA and to EPA.

D13. Investigative Requirements

(a) NASA reserves the right to perform security checks and to deny or restrict access to a NASA Center, facility, or computer system, or to NASA technical information, as NASA deems appropriate. To the extent the recipient needs such access for performance of the work, the recipient shall ensure that individuals needing such access provide the personal background and biographical information requested by NASA. Individuals failing to provide the requested information may be denied such access.

(b) All requests to visit a NASA Center or facility must be submitted in a timely manner in accordance with instructions provided by that Center or facility.

D14. Travel and Transportation

(a) The Fly American Act, 49 U.S.C. 1517, requires the recipient to use U.S. flag air carriers for international air transportation of personnel and property to the extent that service by those carriers is available.

(b) Department of Transportation regulations, 49 CFR 173, govern recipient shipment of hazardous materials and other items.

D15. Safety

(a) The recipient shall act responsibly in matters of safety and shall take all reasonable safety measures in performing under this award. The recipient shall comply with all applicable Federal, state, and local laws relating to safety. The recipient shall maintain a record of, and will notify the

NASA Grant Officer immediately (within one workday) of any accident involving death, disabling injury or substantial loss of property in performing this award. The recipient will immediately (within one workday) advise NASA of hazards that come to its attention as a result of the work performed.

(b) Where the work under this award involves flight hardware, the hazardous aspects, if any, of such hardware will be identified, in writing, by the recipient. Compliance with this term and condition by subawardees/subcontractors shall be the responsibility of the recipient.

D16. Buy American Encouragement

As stated in Section 319 of Public Law 106-391, the NASA Authorization Act as amended recipients are encouraged to purchase only American-made equipment and products.

D17. Investigation and Research Misconduct

Recipients of this award are subject to the requirements of 14 CFR 1275, "Investigation of Research Misconduct."

D18. Allocation of Risk/Liability

(a) With respect to activities undertaken under this award, the recipient agrees not to make any claim against NASA or the U.S. Government with respect to the injury or death of its employees or its subawardees/contractors and subaward/subcontractor employees, or to the loss of its property or that of its subawardees/contractors and subawardees/subcontractors, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.

(b) In addition, as applicable, the recipient agrees to indemnify and hold the U.S. Government and its contractors and subcontractors harmless from any third party claim, judgment, or cost arising from the injury to or death of any person, or for damage to or loss of any property, arising as a result of its possession or use of any U.S. Government property. If State law prohibits the recipient from accepting indemnification, then the recipient shall ensure this term and condition applies to all subrecipients, subawardees, contractors or subcontractors under this award.

D19. Cooperative Agreement

(a) This award is a cooperative agreement and it is anticipated there will be substantial NASA involvement during performance of the effort. NASA and the recipient mutually agree to the following statement of anticipated cooperative interactions which may occur during the performance of this effort

(Reference the approved proposal that contains a detailed description of the work and insert a concise statement of the exact nature of the cooperative interactions NASA and the recipient will provide.)

(b) The terms "award" and "recipient" mean "cooperative agreement" and "recipient of cooperative agreement," respectively, wherever the language appears in terms and conditions included in this agreement.

(c) NASA's ability to participate and perform its collaborative effort under this cooperative agreement is subject to the availability of appropriated funds and nothing in this cooperative agreement commits the United States Congress to appropriate funds therefore.

D20. Multiple Year Award

Multiple Year Award

This is a multiple-year award contingent on the availability of funds, scientific progress of the project, and continued relevance to NASA programs. NASA anticipates continuing support at approximately the following levels

Second year \$, Anticipated funding date. Third year \$, Anticipated funding date. (Periods may be added or omitted, as applicable) End of Term and Condition)

D21. Incremental Funding

Incremental Funding

(a) Only \$XXX of the amount indicated on the face of this award is available for payment and allotted to this award. NASA contemplates making additional allotments of funds during performance of this effort. It is anticipated that these funds will be obligated as appropriated funds become available without any action required by the recipient. The recipient will be given written notification by the NASA Grant Officer.

(b) The recipient agrees to perform work up to the point at which the total amount paid or payable by the Government approximates but does not exceed the total amount actually allotted to this award. NASA is not obligated to reimburse the recipient for the expenditure of amounts in excess of the total funds allotted by NASA to this grant or cooperative agreement. The recipient is not authorized to continue performance beyond the amount allotted to this award.

Special Note - Balance is contingent on availability of funds. The remaining balance to fully fund this year is \$XXX.

D22. Cost Sharing

(a) NASA and the recipient will share in providing the resources necessary to perform the award. NASA funding and non-cash contributions (personnel, equipment, facilities, etc.) and the dollar value of the recipient's cash and/or non-cash contribution will be on a percent recipient basis.

(b) The funding and non-cash contributions by both parties are represented by the following dollar amounts

Government Share Recipient Share Total Amount

(c) Criteria and procedures for allowable and allocable costs of cash and non-cash contributions shall be governed by § 200.306, Cost Sharing or Matching. The applicable Federal cost principles are cited in 2 CFR 200 Subpart E.

(d) The Recipient's share shall not be charged to the Government under this award or under any other contract or award.

D23. New Technology

(a) Definitions.

Administrator, as used in this term and condition, means the Administrator of the National Aeronautics and Space Administration (NASA) or duly authorized representative.

The term “award,” as used in this term and condition, means any actual or proposed grant, cooperative agreement, understanding, or other arrangement, and includes any assignment, substitution of parties, subaward, or subcontract executed or entered into thereunder.

Made, as used in this term and condition, means conception or first actual reduction to practice; provided, that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of performance.

Nonprofit organization, as used in this term and condition, means a domestic university or other institution of higher education or an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)), or any domestic nonprofit scientific or educational organization qualified under a State nonprofit organization statute.

Practical application, as used in this term and condition, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

Reportable item, as used in this term and condition, means any invention, discovery, improvement, or innovation of the awardee, whether or not patentable or otherwise protectable under Title 35 of the United States Code, made in the performance of any work under any NASA award or in the performance of any work that is reimbursable under any term and condition in any NASA award providing for reimbursement of costs incurred before the effective date of the award. Reportable items include, but are not limited to, new processes, machines, manufactures, and compositions of matter, and improvements to, or new applications of, existing processes, machines, manufactures, and compositions of matter. Reportable items also include new computer programs, and improvements to, or new applications of, existing computer programs, whether or not copyrightable or otherwise protectable under Title 17 of the United States Code.

Small business firm, as used in this term and condition, means a domestic small business concern as defined at 15 U.S.C. 632 and implementing regulations (see 13 CFR 121.401*et seq.*) of the Administrator of the Small Business Administration.

Subject invention, as used in this term and condition, means any reportable item which is or may be patentable or otherwise protectable under Title 35 of the United States Code, or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321*et seq.*).

(b) Allocation of principal rights.

(1) Presumption of title.

① Any reportable item that the Administrator considers to be a subject invention shall be presumed to have been made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the National Aeronautics and Space Act of 1958 (51 U.S.C. 20135) (hereinafter called “the Act”), and that presumption shall be conclusive unless at the time of reporting the reportable item the

recipient submits to the Grant Officer a written statement, containing supporting details, demonstrating that the reportable item was not made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.

(i) Regardless of whether title to a given subject invention would otherwise be subject to an advance waiver or is the subject of a petition for waiver, the recipient may nevertheless file the statement described in paragraph (b)(1)(i) of this term and condition. The Administrator will review the information furnished by the recipient in any such statement and any other available information relating to the circumstances surrounding the making of the subject invention and will notify the recipient whether the Administrator has determined that the subject invention was made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.

(2) Property rights in subject inventions. Each subject invention for which the presumption of paragraph (b)(1)(i) of this term and condition is conclusive or for which there has been a determination that it was made in the manner specified in paragraph (A) or (B) of section 20135(b)(1) of the Act shall be the exclusive property of the United States as represented by NASA unless the Administrator waives all or any part of the rights of the United States, as provided in paragraph (b)(3) of this term and condition.

(3) Waiver of rights.

ⓐ Section 20135(g) of the Act provides for the promulgation of regulations by which the Administrator may waive the rights of the United States with respect to any invention or class of inventions made or that may be made under conditions specified in paragraph (A) or (B) of section 20135(b)(1) of the Act.

(i) As provided in 14 CFR part 1245, subpart 1, recipients may petition, either prior to execution of the award or within 30 days after execution of the award, for advance waiver of rights to any or all of the inventions that may be made under an award. If such a petition is not submitted, or if after submission it is denied, the recipient (or an employee inventor of the recipient) may petition for waiver of rights to an identified subject invention within eight months of first disclosure of the invention in accordance with paragraph (e)(2) of this term and condition, or within such longer period as may be authorized in accordance with 14 CFR 1245.105.

(c) Minimum rights reserved by the Government.

(1) With respect to each subject invention for which a waiver of rights is applicable in accordance with 14 CFR part 1245, subpart 1, the Government reserves -

(i) An irrevocable, nonexclusive, nontransferable, royalty-free license for the practice of such invention throughout the world by or on behalf of the United States or any foreign government in accordance with any treaty or agreement with the United States; and

(ii) Such other rights as stated in 14 CFR 1245.107.

(2) Nothing contained in this paragraph (c) shall be considered to grant to the Government any rights with respect to any invention other than a subject invention.

(d) Minimum rights to the Recipient.

(1) The recipient is hereby granted a revocable, nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the

Government acquires title, unless the recipient fails to disclose the subject invention within the times specified in paragraph (e)(2) of this term and condition. The recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the recipient is a party and includes the right to grant sublicenses of the same scope to the extent the recipient was legally obligated to do so at the time the award was issued. The license is transferable only with the approval of the Administrator except when transferred to the successor of that part of the recipient's business to which the invention pertains.

(2) The recipient's domestic license may be revoked or modified by the Administrator to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with 37 CFR part 404, Licensing of Government Owned Inventions. This license will not be revoked in that field of use or the geographical areas in which the recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the Administrator to the extent the recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the recipient will be provided a written notice of the Administrator's intention to revoke or modify the license, and the recipient will be allowed 30 days (or such other time as may be authorized by the Administrator for good cause shown by the recipient) after the notice to show cause why the license should not be revoked or modified. The recipient has the right to appeal to the Administrator any decision concerning the revocation or modification of its license.

(e) Invention identification, disclosures, and reports.

(1) The recipient shall establish and maintain active and effective procedures to assure that reportable items are promptly identified and disclosed to recipient personnel responsible for the administration of this New Technology term and condition within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this award. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of the reportable items, and records that show that the procedures for identifying and disclosing reportable items are followed. Upon request, the recipient shall furnish the Grant Officer a description of such procedures for evaluation and for determination as to their effectiveness.

(2) The recipient will disclose each reportable item to the New Technology Representative, with notice to the Grant Officer, within two months after the inventor discloses it in writing to recipient personnel responsible for the administration of this New Technology term and condition or, if earlier, within six months after the recipient becomes aware that a reportable item has been made, but in any event for subject inventions before any on sale, public use, or publication of such invention known to the recipient. The disclosure to the agency shall be in the form of a written report and shall identify the award under which the reportable item was made and the inventor(s) or innovator(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the reportable item. The disclosure shall also identify any publication, on sale, or public use of any subject invention and whether a manuscript

describing such invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the recipient will promptly notify the agency of the acceptance of any manuscript describing a subject invention for publication or of any on sale or public use planned by the recipient for such invention.

(3) The recipient shall furnish the New Technology Representative, with notice to the Grants Officer, the following:

(i) Interim new technology summary reports every 12 months from the date of the award, listing reportable items during that period, and certifying that all reportable items have been disclosed (or that there are no such inventions) and that the procedures required by paragraph (e)(1) of this term and condition have been followed.

(ii) A final new technology summary report within 90 days after the end of the period of performance, listing all reportable items or certifying that there were no such reportable items, and listing all research subawardees/subcontractors at any tier containing a patent rights clause or certifying that there were no such subcontractors.

(4) The recipient agrees, upon written request of the Patent Representative, to furnish additional technical and other information available to the recipient as is necessary for the preparation of a patent application on a subject invention and for the prosecution of the patent application, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions.

(5) The recipient agrees, subject to 5(a) below, the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this term and condition.

(a) Publishing information concerning an invention before a patent application is filed on a subject invention may create a bar to a valid patent. To avoid this bar, agencies may withhold information from the public that discloses any invention in which the Government owns or may own a right, title, or interest (including a nonexclusive license) (see 35 U.S.C. 205 and 3737 CFR part 401). Agencies may only withhold information concerning inventions for a reasonable time in order for a patent application to be filed. Once filed in any patent office, agencies are not required to release copies of any document that is a part of a patent application for those subject inventions.

(f) Examination of records relating to inventions.

(1) The Grant Officer or any authorized representative shall, until 3 years after final payment under this award, have the right to examine any books (including laboratory notebooks), records, and documents of the recipient relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this award to determine whether -

(i) Any such inventions are subject inventions;

(ii) The recipient has established and maintained the procedures required by paragraph (e)(1) of this term and condition; and

(iii) The recipient and its inventors have complied with the procedures.

(2) If the New Technology Representative or Patent Representative learns of an unreported recipient invention, the recipient may be required to disclose the invention to the agency for a

determination of ownership rights.

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(h) Subawards/Subcontracts.

(1) Unless otherwise authorized or directed by the Grant Officer, the recipient shall -

(i) Include the clause at NASA FAR Supplement (NFS) 1852.227-70, New Technology, (suitably modified to identify the parties) in any subaward/subcontract hereunder (regardless of tier) with other than a small business firm or nonprofit organization for the performance of experimental, developmental, or research work; and

(ii) Include the FAR clause 52.227-11, as modified by the NASA FAR Supplement (NFS) 1852.227-11, "Patent Right-Retention by the Contractor (Short Form)" (suitably modified to identify the parties) in any subaward/subcontract hereunder (regardless of tier) with a small business firm or nonprofit organization for the performance of experimental, developmental, or research work.

(2) In the event of a refusal by a prospective subrecipient to accept such a clause the recipient -

(i) Shall promptly submit a written notice to the Grant Officer setting forth the subrecipient's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subaward/subcontract without the written authorization of the Grant Officer.

(3) The recipient shall promptly notify the Grant Officer in writing upon the award of any subaward/subcontract at any tier containing a patent rights clause by identifying the subrecipient, the applicable patent rights term and condition/clause, the work to be performed under the subrecipient and the dates of award and estimated completion. Upon request of the Grant Officer, the recipient shall furnish a copy of such subaward/subcontract, and, no more frequently than annually, a listing of the subawards/subcontracts that have been awarded.

(4) The subrecipient will retain all rights provided for the recipient in paragraph (h)(1)(i) or (ii) of this term and condition, whichever is included in the subaward/subcontracts, and the recipient will not, as part of the consideration for awarding the subaward/subcontract, obtain rights in the subrecipients's subject inventions.

(i) Preference for United States industry. Unless provided otherwise, no recipient that receives title to any subject invention and no assignee of any such recipient shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Administrator upon a showing by the recipient or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

D24. Designation of New Technology Representative and Patent Representative

Prescription - The Grant Officer shall include this term and condition in all awards containing the term and condition "Patent Rights" in Appendix D8 or the term and condition "New Technology" in Appendix D23.

Designation of New Technology Representative and Patent Representative

(a) For purposes of administration of the term and condition entitled "New Technology," or "Patent Rights" whichever is included, the following named representatives are hereby designated by the Grant Officer to administer such term and condition -

- New Technology Representative
- Patent Representative

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the term and condition, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative, with notification to the Grant Officer, unless transmitted in response to correspondence or request from the Patent Representative. Inquires or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. This term and condition shall be included in any subaward/subcontract hereunder requiring a "New Technology" term and condition or "Patent Rights - Retention by the Contractor (Short Form)" term and condition unless otherwise authorized or directed by the Grant Officer. The respective responsibilities and authorities of the above named representatives are set forth in the Grants and Cooperative Agreement Manual.

D25. Equipment and Other Property under Awards with Commercial Firms

(a) This award permits acquisition of special purpose equipment required for the conduct of research. Acquisition of special purpose equipment costing in excess of \$5,000 and not included in the approved proposal budget requires the prior approval of the Grant Officer unless the item is merely a different model of an item shown in the approved proposal budget.

(b) Recipients may not purchase, as a direct cost to the award, items of general purpose equipment, examples of which include but are not limited to office equipment and furnishings, air conditioning equipment, reproduction and printing equipment, motor vehicles, and automatic data processing equipment. If the recipient requests an exception, the recipient shall submit a written request for Grant Officer approval, prior to purchase by the recipient, stating why the recipient cannot charge the general purpose equipment to indirect costs.

(c) Under no circumstances shall award funds be used to acquire land or any interest therein, to acquire or construct facilities (as defined in 48 CFR (FAR) 45.301), or to procure passenger carrying vehicles.

(d) The Government shall have title to equipment and other personal property acquired with Government funds. Such property shall be disposed of pursuant to 48 CFR (FAR) 45.603.

(e) Title to Government furnished equipment (including equipment, title to which has been transferred to the Government prior to completion of the work) will remain with the Government.

(f) The recipient shall establish and maintain property management standards for Government property and otherwise manage such property as set forth in 48 CFR (FAR) 45.5 and 48 CFR (NFS) 1845.5.

(g) Recipients shall submit annually a NASA Form 1018, NASA Property in the Custody of Contractors,

in accordance with the instructions on the form, the provisions of 48 CFR (NFS) 1845.71 and any supplemental instructions that may be issued by NASA for the current reporting period. The original NF 1018 shall be submitted to the Center Deputy Chief Financial Officer (Finance) with three copies sent concurrently to the Center Industrial Property Officer. The annual reporting period shall be from October 1 of each year through September 30 of the following year. The report shall be submitted in time to be received by October 15. Negative reports (*i.e.* no reportable property) are required. The information contained in the reports is entered into the NASA accounting system to reflect current asset values for agency financial statement purposes. Therefore, it is essential that required reports be received no later than October 15. A final report is required within 30 days after the end of the period of performance.

(h) The requirements set forth in this term and condition supersedes award term and condition in Appendix D7, Equipment and Other Property.

D26. Listing of Reportable Equipment and Other Property

(a) Title to Federally-owned property provided to the recipient remains vested in the Federal Government, and shall be managed in accordance with § 200.312. The following items of Federally-owned property are being provided to the recipient for use in performance of the work under this award

(List property or state “not applicable.”)

(b) The following specific items of equipment acquired by the recipient have been identified by NASA for transfer of title to the Government when no longer required for performance under this award. This equipment will be managed in accordance with 200.313, and shall be transferred to NASA or NASA's designee in accordance with the procedures set forth at 200.313(e) -

(List property or state “not applicable.”)

D27. Indirect Costs

Unless otherwise directed in 2 CFR part 200, if during the course of this award, the approved indirect cost rate is revised, changed or removed, that rate must be applied, as allowed, to the covered direct costs that are expended during the time frame of that rate agreement. Any corrections, either up or down, to the approved budget submitted with the awarded application must be reflected in the awardee's records of costs and should be audited as such.

D28. Access to Research Results

(a) This award is subject to the requirements of the, “NASA Plan: Increasing Access to the Results of Scientific Research,” which covers public access to digital scientific data and peer-reviewed publications. For purposes of this term and condition, the following definitions apply:

(1) Awardee: Any recipient of a NASA grant or cooperative agreement, its investigators, and subrecipient (subaward or contract as defined in 2 CFR 200.92 and 200.22, respectively) at any level.

(2) Final Peer-Reviewed Manuscript: The final text version of a peer-reviewed article disclosing the results of scientific research which is authored or co-authored by the Awardee or funded, in whole or in part, with funds from a NASA award, that includes all modifications from the publishing peer review process, and all graphics and supplemental material prepared by Awardee.

(b) The recipient shall:

(1) Comply with their approved Data Management Plan submitted with its proposal, and as

modified upon agreement by the recipient and NASA from time to time during the course of the period of performance.

- (2) Ensure that any Final Peer-Reviewed Manuscript is submitted to the NASA-designated repository, currently the PubMed Central system at <http://www.ncbi.nlm.nih.gov/pmc/>. NASA will provide instructions for completing the submission process under separate cover. Ensure that the Final Peer-Reviewed Manuscript is submitted to PubMed Central within one year of completion of the peer review process.
- (3) Ensure that any publisher's agreements entered into by an Awardee will allow for the Awardee to comply with these requirements including submission of Final Peer-Reviewed Manuscripts to the NASA-designated repository, as listed in paragraph (b)(2) of this term and condition, with sufficient rights to permit such repository to use such Final Peer-Reviewed Manuscript in its normal course, including rights to permit users to download XML and plain text formats.
- (4) Hereby represent and warrant that Awardee has secured for recipient the right to submit the Final Peer-Reviewed Manuscript to the NASA-designated repository for use as set forth herein.
- (5) Include in annual and final reports a list of Final Peer-Reviewed Manuscripts covered by this term and condition.

Appendix E – Additional Terms and Conditions

The following contains the text of the terms and conditions referenced in paragraph 5 of section 5.10.1 in the GCAM.

1. Cross-Waiver of Liability for International Space Station Activities

(This Term and Condition shall be included in grants when the effort to be performed may involve Protected Space Operations, as that term is defined in the provision, relating to the International Space Station. If a grant or cooperative agreement may involve a launch other than the International Space Station, the Grant Officer also shall insert the special Term and Condition entitled “Cross-Waiver of liability for Science or Space Exploration Activities unrelated to the International Space Station.”)

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. The language in the cross waiver is required by the international agreements NASA has with its international partners for the use of the Space Station.)

CROSS-WAIVER OF LIABILITY FOR INTERNATIONAL SPACE STATION ACTIVITIES (DEC 2014)

(a) The Intergovernmental Agreement Among the Government of Canada, Governments of Member States of the European Space Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America concerning Cooperation on the Civil International Space Station (IGA) for the International Space Station (ISS) contains a cross-waiver of liability provision to encourage participation in the exploration, exploitation, and use of outer space through the ISS. This cross-waiver of liability is to be broadly construed to achieve this objective.

(b) As used in this provision, the term:

(1) “Agreement” refers to any NASA agreement, grant, cooperative agreement, or contract that contains the cross-waiver of liability provision authorized by 14 CFR Part 1266.102.

(2) “Damage” means:

- (i) Bodily injury to, or other impairment of health of, or death of, any person;
- (ii) Damage to, loss of, or loss of use of any property;
- (iii) Loss of revenue or profits; or
- (iv) Other direct, indirect, or consequential damage.

(3) "Launch Vehicle" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries payloads or persons, or both.

(4) "Partner State" includes each Contracting Party for which the IGA has entered into force, pursuant to Article 25 of the IGA or pursuant to any successor agreement. A Partner State includes its Cooperating Agency. It also includes any entity specified in the Memorandum of Understanding (MOU) between NASA and the Government of Japan's Cooperating Agency in the implementation of that MOU.

(5) "Party" means a party to an Agreement involving activities in connection with the ISS, including a party that is the prime recipient under this grant/cooperative agreement.

(6) "Payload" means all property to be flown or used on or in a Launch Vehicle or the ISS.

(7) "Protected Space Operations" means all Launch or Transfer Vehicle activities, ISS activities, and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of the IGA, MOUs concluded pursuant to the IGA, implementing agreements, and contracts to perform work in support of NASA's obligations under these Agreements. It includes, but is not limited to:

(i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, the ISS, Payloads, or instruments, as well as related support equipment and facilities and services; and

(ii) All activities related to ground support, test, training, simulation, or guidance and control equipment and related facilities or services. "Protected Space Operations" also includes all activities related to evolution of the ISS, as provided for in Article 14 of the IGA. "Protected Space Operations" excludes activities on Earth which are conducted on return from the ISS to develop further a Payload's product or process for use other than for ISS-related activities in implementation of the IGA.

(8) "Related Entity" means:

(i) A contractor, recipient or subcontractor of a Party or a Partner State at any tier;

(ii) A user or customer of a Party or a Partner State at any tier; or

(iii) A contractor or subcontractor of a user or customer of a Party or a Partner State at any tier.

The terms "recipient," "contractor," and "subcontractor" include suppliers of any kind.

(9) "Transfer Vehicle" means any vehicle that operates in space and transfers Payloads or persons or both between two different space objects, between two different locations on the same space object, or between a space object and the surface of a celestial body. A "Transfer Vehicle" also includes a vehicle that departs from and returns to the same location on a space object.

(c)(1) The Recipient agrees to a cross-waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against:

(i) A Party as defined in (B) (5) above;

(ii) A Partner State including the United States of America;

(iii) A Related Entity of any entity identified in paragraph (c) (1) (i) or (c) (1) (ii) of this provision; or

(iv) The employees of any of the entities identified in paragraphs (c) (1) (i) through (c)

(1) (iii) of this provision.

(2) In addition, the Recipient shall, by contract or otherwise, extend the cross-waiver of liability set forth in paragraph (c)(1) of this provision to its Related Entities at any tier by requiring them, by contract or otherwise, to:

(i) Waive all claims against the entities or persons identified in paragraphs (c) (1) (i) through (c) (1) (iv) of this provision; and

(i) Require that their Related Entities waive all claims against the entities or persons identified in paragraphs (c) (1) (i) through (c)(1)(iv) of this provision.

(3) For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of claims arising from the Convention on International Liability for Damage Caused by Space Objects, which entered into force on September 1, 1972, where the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

(4) Notwithstanding the other conditions of this provision, this cross-waiver of liability shall not be applicable to:

(i) Claims between a Recipient and its own Related Entities;

(i) Claims made by a natural person, his/her estate, survivors or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross- waiver) for bodily injury to, or other impairment of health of, or death of, such person;

(ii) Claims for Damage caused by willful misconduct;

(iv) Intellectual property claims; or

(v) Claims for Damage resulting from a failure of the Recipient to extend the cross-waiver of liability to its Related Entities, pursuant to paragraph (c)(2) of this provision.

(5) Nothing in this provision shall be construed to create the basis for a claim or suit where none would otherwise exist.

(6) This cross-waiver shall not be applicable when 51 U.S.C. 50101 et seq. is applicable.

(7) This cross-waiver shall not apply to or affect the rights and obligations arising from any other Term and Condition or provision of this grant/cooperative agreement.

(End of Provision)

2. Cross-Waiver of liability for Science or Space Exploration Activities Unrelated to the International Space Station.

(This Term and Condition shall be included in solicitations such as Broad Agency Announcements, e.g., Announcements of Opportunity (AO's) and NASA Research Announcements (NRA), grants, and cooperative agreements when the effort may result involve a launch unrelated to the International Space Station. If a grant or cooperative agreement may involve the International Space Station, the Grant Officer also shall insert the special Term and Condition entitled "Cross-Waiver of liability for International Space Station Activities."

The cross-waivers will require the recipient to extend the cross-waiver terms and conditions to their subcontractors at any tier and related entities, ensuring those subcontractors and related entities also waive all claims against any entity or person defined in the provision for damages arising out of Protected Space Operations. This cross-waiver is intended to be broadly construed, and NASA extends it to its related entities as set forth in the provision. The language in the cross

waiver is required by the international agreements NASA has with its international partners for the exploration of space.)

**CROSS-WAIVER OF LIABILITY FOR SCIENCE OR SPACE EXPLORATION ACTIVITIES
UNRELATED TO THE INTERNATIONAL SPACE STATION
(DEC 2014)**

(c) The purpose of this provision is to extend a cross-waiver of liability for activities conducted under Agreements involving Science or Space Exploration activities, unrelated to the International Space Station (ISS), but which involve a launch. This cross-waiver of liability shall be broadly construed to achieve the objective of furthering participation in space exploration, use, and investment.

(d) As used in this provision, the term:

(1) "Agreement" refers to any NASA agreement, grant, cooperative agreement, or contract that contains the cross-waiver of liability provision authorized in 14 CFR 1266.104.

(2) "Damage" means:

- (i) Bodily injury to, or other impairment of health of, or death of, any person;
- (ii) Damage to, loss of, or loss of use of any property;
- (iii) Loss of revenue or profits; or
- (iv) Other direct, indirect, or consequential damage;

(3) "Launch Vehicle" means an object, or any part thereof, intended for launch, launched from Earth, or returning to Earth which carries Payloads or persons, or both.

(4) "Party" means a party to an Agreement for Science or Space Exploration activities, unrelated to the ISS, but which involve a launch, including a party that is the prime recipient under this grant/cooperative agreement.

(5) "Payload" means all property to be flown or used on or in a Launch Vehicle.

(6) "Protected Space Operations" means all Launch or Transfer Vehicle activities and Payload activities on Earth, in outer space, or in transit between Earth and outer space in implementation of an Agreement for Science or Space Exploration activities, unrelated to the ISS, but which involve a launch. Protected Space Operations begins at the signature of the Agreement and ends when all activities done in implementation of the Agreement are completed. It includes, but is not limited to:

(i) Research, design, development, test, manufacture, assembly, integration, operation, or use of Launch or Transfer Vehicles, Payloads, or instruments, as well as related support equipment and facilities and services; and

(ii) All activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.

Protected Space Operations excludes activities on Earth which are conducted on return from space to develop further a Payload's product or process other than for the activities within the scope of an Agreement.

(7) "Related entity" means:

- (i) A contractor, recipient or subcontractor of a Party at any tier;
- (ii) A user or customer of a party at any tier; or
- (iii) A contractor or subcontractor of a user or customer of a Party at any tier. The terms "recipient," "contractor" and "subcontractor" include suppliers of any kind.

(e) Cross-waiver of liability:

(1) The Recipient agrees to a waiver of liability pursuant to which it waives all claims against any of the entities or persons listed in paragraphs (c)(1)(i) through (c)(1)(iv) of this Term and Condition based on Damage arising out of Protected Space Operations. This cross-waiver shall apply only if the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations. The waiver shall apply to any claims for Damage, whatever the legal basis for such claims, against:

- (i) A Party;
- (ii) A Party to another Agreement that includes flight on the same Launch Vehicle;
- (iii) A Related Entity of any of the entities identified in (c)(1)(i) or (c)(1)(ii) of this provision; or
- (iv) The employees of any of the entities identified in (c)(1)(i) through (c)(1)(iii) of this provision.

(2) The Recipient agrees to extend the cross-waiver of liability as set forth in paragraph (c)(1) of this provision to its own Related Entities at all tiers by requiring them, by contract or otherwise, to:

- (i) Waive all claims against the entities or persons identified in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision; and
- (ii) Require that their Related Entities waive all claims against the entities or persons identified in paragraph (c)(1)(i) through (c)(1)(iv) of this provision.

(3) For avoidance of doubt, this cross-waiver includes a cross-waiver of claims arising from the Convention on International Liability for Damage Caused by Space Objects, which entered into force on September 1, 1972, where the person, entity, or property causing the Damage is involved in Protected Space Operations and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

(4) Notwithstanding the other conditions of this provision, this cross-waiver of liability shall not be applicable to:

- (i) Claims between the Recipient and its own Related Entities;
- (ii) Claims made by a natural person, his/her estate, survivors, or subrogees (except when a subrogee is a Party to an Agreement or is otherwise bound by the terms of this cross-waiver) for bodily injury to, or other impairment of health, or death of such person;
- (iii) Claims for Damage caused by willful misconduct;
- (iv) Intellectual property claims; or
- (v) Claims for damages resulting from failure of the Recipient to extend the cross-waiver of liability to its related entities, pursuant to paragraph (c)(2) of this provision.

(5) Nothing in this provision shall be construed to create the basis for a claim or suit where none would otherwise exist.

(6) This cross-waiver shall not be applicable when 51 U.S.C. 50101 et seq. is applicable.

(7) This cross-waiver shall not apply to or affect the rights and obligations arising from any other Term and Condition or provision of this grant/cooperative agreement.

3. Personal identity verification of Recipient Personnel.

(This provision shall be included in grants when access is needed to the NASA Center and/or NASA information systems for greater than 180 days.)

PERSONAL IDENTITY VERIFICATION OF RECIPIENT PERSONNEL (DEC

2014)

(f) The Recipient shall comply with agency personal identity verification procedures identified in the contract that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24 and Federal Information Processing Standards Publication (FIPS PUB) Number 201.

(g) The Recipient shall account for all forms of Government-provided identification issued to the Recipient employees in connection with performance under this contract. The Recipient shall return such identification to the issuing agency at the earliest of any of the following, unless otherwise determined by the Government:

- (1) When no longer needed for grant performance.
- (2) Upon completion of the Recipient's employee's employment.
- (3) Upon grant completion or termination.

(h) The Grant Officer may delay final payment under a grant if the Recipient fails to comply with these requirements.

(i) The Recipient shall insert the substance of this clause, including this paragraph (d), in all subcontracts or subagreements when their employees are required to have routine physical access to a Federally-controlled facility and/or routine access to a Federally-controlled information system. It shall be the responsibility of the Recipient to return such identification to the issuing agency in accordance with the terms set forth in paragraph (b) of this section, unless otherwise approved in writing by the Grant Officer.

(End of Provision)

4. Restrictions on the Use of the NASA Seal, Insignia, Logotype, Program Identifiers, or Flags.

(This Term and Condition shall be included in all grants.)

RESTRICTIONS ON THE USE OF THE NASA SEAL, INSIGNIA, LOGOTYPE, PROGRAM IDENTIFIERS, OR FLAGS (DEC 2014)

- (a) In accordance with 14 CFR Part 1221, the NASA Seal, NASA Insignia, NASA Logotype, NASA Program Identifiers, and the NASA Flags are protected and shall be used exclusively to represent NASA, its programs, projects, functions, activities, or elements.
- (b) The use of these devices by recipients shall be governed by the requirements and restrictions set forth at 14 CFR §§ 1221.109-113.
- (c) The use of these devices by recipients for any purpose other than as authorized by NASA regulations shall be prohibited. Their misuse shall be subject to the penalties authorized by statute, as set forth in 14 CFR §1221.115 and shall be reported as provided in 14 CFR §1221.116.

(End of Provision)

2. Micro-Purchase Threshold.

(This Term and Condition shall be included in all grants and cooperative agreement awards issued to institutions of higher education, or related or affiliated nonprofit entities, or to nonprofit research organizations or independent research institutes.)

MICRO-PURCHASE THRESHOLD (OCT 2017)

Micro-purchase Threshold. The non-Federal entity must use one of the methods of procurement as prescribed in 2 CFR 200.320 (A). As defined in 2 CFR 200.67, the micro-purchase threshold for acquisitions of supplies or services made under grant and cooperative agreement awards is —

- (i) \$10,000; or
- (ii) As set by 48 CFR Subpart 2.1 FAR or
- (iii) Such higher threshold as determined appropriate by the head of the relevant executive agency and consistent with audit findings under chapter 75 of Title 31, United States Code, internal institutional risk assessment, or State law.

(End of Provision)

Appendix F – Required Publications and Reports

NOTE - Reports are valuable to ensure that the NASA Grants and Cooperative Agreement program is efficient and effective. The recipients must keep such records and submit to the responsible NASA official or designee timely, complete, and accurate reports.

The recipient shall submit the publications and reports indicated below:

ACRONYMS

AGO = ADMINISTRATIVE GRANT OFFICER IPO = INDUSTRIAL PROPERTY OFFICER

NTR = NEW TECHNOLOGY REPRESENTATIVE CC = CLOSEOUT CONTRACTOR

PO = PATENT COUNSEL OFFICE

FMO = FINANCIAL MANAGEMENT OFFICE TO = TECHNICAL OFFICER

GO = NASA GRANT OFFICER

UAO = UNIVERSITY AFFAIRS OFFICER

HHS/PMS = HEALTH AND HUMAN SERVICES PAYMENT MANAGEMENT SYSTEM

STIPO = SCIENTIFIC & TECHNICAL INFORMATION PROGRAM OFFICE

	REPORTS	REPORT DUE/FREQUENCY	DISTRIBUTION
	Quarterly Federal Cash Transactions Reports (SF 425) <i>(Required for all Grants and Cooperative except grants and agreements where invoicing is required per the terms and conditions of award)</i>	Within 30 days following the end of each quarter of the Federal fiscal year. <i>(Ref. GCAM – Appendix D6)</i>	HHS/PMS
	Annual Inventory Report of Federally-Owned Property in Custody of the Recipient <i>(Required for all Grants and Cooperative Agreements, except when a commercial firm.)</i>	No later than October 15 of each year. NOTE: Negative reports are not required. <i>(Ref. GCAM – Appendix D7)</i>	FMO, IPO
	Progress Reports <i>(Required for all Grants and Cooperative Agreements; unless period of performance is less than one year.)</i>	Annually, 60 days prior to the anniversary date of the grant/cooperative agreement (except final year). <i>(Ref. GCAM – Appendix D2)</i>	TO, GO, NTR

	Disclosure of Subject Inventions/Reportable Items (New Technology Report (NTR)) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i>	<p>Within 2 months after inventor discloses it to recipient. (Ref. GCAM- Appendix D8, Appendix D23 and Appendix D24)</p> <p><i>eNTR</i> (http://invention.nasa.gov)</p>	PO, TO, GO, NTR
	Election of Title to a Subject Invention <i>(Required for all Grants and Cooperative Agreements)</i>	<p>Within 2 years of disclosure of a subject invention being elected, except in any case where publication, on sale or public use of the subject invention being elected has initiated the one-year statutory period wherein valid patent protection can still be obtained in the United States, at least 60 days prior to the end of the statutory period. (Ref. GCAM - Appendix D8 and Appendix D23)</p>	PO, TO, GO
	Interim New Technology Summary Report (NTSR) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i>	<p>Every 12 months from the date of the grant/cooperative agreement. (Note: Negative reports are required.) (Ref. GCAM – Appendix D8, Appendix D23 and Appendix D24)</p> <p><i>eNTR</i> (http://invention.nasa.gov)</p>	GO, NTR
	Notification of Decision to Forego Patent Protection <i>(Required for all Grants and Cooperative Agreements)</i>	<p>As applicable, not less than 30 days before the expiration of the response period required by the relevant patent office. (Ref. GCAM – Appendix D8 and Appendix D23)</p>	PO, TO, GO

	Utilization of Subject Invention/Reportable Items <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i>	Every 12 months from the date a subject invention is elected. Note: Negative reports are required. (Ref. GCAM – Appendix D8 and Appendix D23)	PO, TO, GO
	Annual NASA Form 1018 Property in the Custody of Contractors <i>(Required for all Grants and Cooperative Agreements with commercial organizations)</i>	Due not later than October 15 of each year. Note: Negative reports are required. (Ref. GCAM – Appendix D25)	FMO, IPO
	FINAL REPORTS	REPORT DUE	RECIPIENT
	Final New Technology Summary Report (NTSR) <i>(Required for all Grants and Cooperative Agreements except for those issued solely to support education programs)</i>	Within 90 days after the expiration date of the grant/cooperative agreement. (Note: Negative reports are required.) (Ref. GCAM Appendix D8, Appendix D23 and Appendix D24) eNTR (http://invention.nasa.gov)	PO, GO, NTR
	Properly Certified Final Federal Financial Report, SF 425 <i>(Required for all Grants and Cooperative Agreements)</i>	Within 90 days after the expiration date of the grant/cooperative agreement. (Ref. GCAM – Appendix D6)	FMO, GO
	Summary of Research / Education Activity Report <i>(Required for all Grants and Cooperative Agreements)</i>	Within 90 days after the expiration date of the grant/cooperative agreement. (Ref. GCAM – Appendix D2) <i>For research related training program grants, the summary of research report is completed by the Student.</i>	TO, GO, NTR, STIPO

	Final Inventory Report of Federally-Owned Property <i>(Required for all Grants and Cooperative Agreements, except those issued solely for education programs and grants and cooperative agreements with commercial organizations)</i>	Within 60 days after the expiration date of the grant/cooperative agreement. <i>(Ref. GCAM – Appendix D7)</i>	CC, IPO, GO
	Final NASA Form 1018 NASA Property in the Custody of Contractors <i>(Required for Grants and Cooperative Agreements with commercial organizations)</i>	Within 30 days after the expiration of the grant or cooperative agreement. <i>(Ref. GCAM – Appendix D25)</i>	FMO, IPO

Appendix G – Examples of Costs Categories from 2 CFR 200 Subpart E

1. Direct Labor (salaries, wages, and fringe benefits): List number and titles of personnel, amounts of time to be devoted to the grant, and rates of pay.
2. Other Direct Costs:
 - a. Subcontracts: Describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting.
 - b. Consultants: Identify consultants to be used, why they are necessary, the time they will spend on the project, and rates of pay.
 - c. Equipment: List separately. Explain the need for items costing more than \$5,000, unless a lower threshold has been established by your institution for classifying such purchases as equipment. Describe the basis for estimated cost. General purpose equipment is not allowable as a direct cost unless specifically approved by the grant officer. Grant award constitutes approval for any equipment provided and was requested in the original proposal. Requests by grant recipients for the acquisition of equipment shall be supported by written documentation setting forth the description, purpose, and acquisition value of the equipment.
 - d. Supplies: For items below the threshold established for equipment, provide the general categories of needed supplies, the method of acquisition and the estimated cost.
 - e. Travel: Describe the purpose of the proposed travel in relation to the grant and provide the basis of the estimate, including information on destination and number of travelers where known.
 - f. Other: Identify and support all other direct costs not covered by 2a through 2e. Provide an itemized list explaining the need for each item and the basis for the estimate.
3. Facilities and Administrative (F&A) Costs: Identify F&A cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, and telephone number of the Federal agency official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the F&A expense pool and corresponding allocation base for each rate.
4. Other Applicable Costs: Provide description, detail, and necessity for each item.
5. Subtotal-Estimated Costs: Provide the sum of items 1 through 4.
6. Less Proposed Cost Sharing (if any): Provide the amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.
7. Carryover Funds (if any): Provide the dollar amount of any funds that are expected to be available for carryover from the prior budget period. Identify how the funds will be used if they are not used to reduce the budget. NASA officials will decide whether to use all or part of the anticipated carryover to reduce the budget. Not applicable to 2nd-year and subsequent-year budgets submitted for the award of a multiple year grant.
8. Total Estimated Costs: Provide the total after subtracting items 6 and 7 from item 5.